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Science in the Study of Administration[1]

This paper is a report by a political scientist on a field of literature which has not been much visited by political scientists, the literature of scientific administration. This is very large ; an amateur in it cannot in the time available to him read more than a sample, and the picture presented here is over-simplified because of this limitation, as well as because of the limits of space.

With some notable exceptions, the books on scientific administration are not good reading. Their authors have an engaging fervour and sense of mission, but most of them use private jargons to say things which could be more accurately said without them, and they seldom appreciate the virtues of brevity and precision. In fact, there is some excuse for academic snobbery at their expense ; but snobbery of this sort is always a mistake, and it has excluded political scientists from a field in which they can contribute a great deal. It is also a field in which the interest of the plain man is now engaged very actively, perhaps more actively than in the traditional problems of the State, and which is therefore important in popular thought about problems of political and social theory.

The central theme can be stated simply. It is an old commonplace that social science lags behind natural science and that most of the woes of the world are due to this deficiency. About fifty years ago, there appeared a second commonplace, that this is an age of administration, an age in which the bureaucrat takes more decisions than the politician, in which the salaried manager is more important than the board of directors or the individual entrepreneur. If we put these propositions together, it seems to follow that the first task for social scientists is to formulate a science of administration.

[1]This paper contains the substance of a lecture given at the London School of Economics on 5th November, 1951.

In the years about 1900, various people lighted independently upon this train of thought. In the U.S.A. there was F. W. Taylor's gospel of scientific management in industry. In France, Henri Fayol called for the formulation of *la doctrine administrative*, which was to be applicable both to industry and to public business. In Britain this was the period in which writers as diverse as Kipling, the Webbs, and H. G. Wells agreed upon government by an élite, and disagreed bitterly about the sort of élite that was required. The Webbs never seriously attempted to construct a formal science of public administration, and there have been few British pioneers in the field of business management : but in its own way the movement was as strong here as in France and the U.S.A. In Germany too there was the age of "rationalisation," usually associated with the name of Walter Rathenau ; the man who introduced *Planwirtschaft* in Germany in the first World War, made the Rapallo treaty with Russia in April, 1922, and was murdered by German nationalists in spite of his great services to the German national cause.[1]

It may be well to recall here, as it is relevant to the argument later, that in this fifty years since 1900 political theory has been largely concerned with doctrines of two kinds ; doctrines of the divine right of an élite to rule, and doctrines of the divine right of the group against the State and against the individual. In different parts of the world ambitious men have found different theoretical pretexts for claiming to be the predestined élite, grounds of blood or brains or "natural selection." None of them, it seems, has based a claim to rule upon knowledge of the science of administration. But James Burnham has come pretty close to it in his attempt to find a political philosophy for the American business executive ; and it is worth noticing that the most important of these self-styled élites, that of the Leninists (from which Burnham deviated), founds its claim to rule on the claim that the missing social science has now been discovered, and that knowledge of it confers the right to govern. The Communist Party does not

[1]There is a useful article on him by Dr. W. O. Henderson in *The Economic History Review*, Second Series, Vol. IV (1951), p. 98.

concern itself with scientific administration as such, but doubtless scientific administration can be deduced by the orthodox from scientific Marxism.

In contrast with these claims to govern, there have been theories of a different sort ; theories in part stated explicitly by the pluralists, in part implied by psychological and sociological doctrines in vogue. These are doctrines of the absorption of the individual in a natural whole the laws of which govern his being—or which ought to govern his being ; there is almost always a blur in these theories over the distinction between statements of what is and statements of what ought to be. This difficulty is present in the work of enthusiastic pluralists like Miss Mary Parker Follett, a learned and able lady who is important in this context because she has been adopted as one of the patron saints of scientific administration : it seems to the layman to be present in many of the claims of psychotherapy and group therapy.

Theories of these two types have a long history in political philosophy ; the patterns of argument about them are quite familiar, and so are their uses for political persuasion, often in combinations which make good propaganda but odd logic. Their relevance here is that a period in which they were much in vogue coincided with the development of scientific administration, although few writers in that field knew enough politics to realise the bearings of political theory upon their own work. The theme of this paper is that the notion of scientific administration is a point at which these incompatible doctrines meet, and that its paradoxes arise from a use of two presuppositions, which are difficult to reconcile, although both seem to be essential to it ; the presupposition that human affairs are decided by individual wills, the presupposition that it will in the end be possible to predict the actions of the individual by scientific study of the group.

For the present purpose it is unnecessary to spend time in seeking a definition of "administration," as the word will be used only as it is used by most of the authors concerned, in a general and popular sense. The notion of "administration" is felt vaguely by most people to have a unity of some sort,

to "make sense," and this is guidance enough at the outset of an attempt to study it. It would not be sensible to start with a full-blown definition. On the other hand, it is relevant to consider what these authors were saying about their proposals when they called for a new "science" ; this depends on the meaning of that word about the year 1900 in England and in the U.S.A.

This was the end of a long story.

In Latin *scientia* is the word most commonly used to translate the Greek word ἐπιστήμη, which embodies a world of thought alien to the Roman mind and language. Ἐπιστήμη is that which can be fully understood ; a body of knowledge which is systematic, which is in some sense timeless, which can be passed from mind to mind and which therefore in some sense exists independently of any single human creature. It is contrasted with τέχνη, an art or skill, which can be learnt only by practice and which therefore involves the temporal, the material, the individual. This distinction between science and art was common to all Greek philosophy after Socrates ; none of the rival schools disputed it, and all subsequent European thought has been dominated by it.

The model of science in this sense is mathematics ; and all knowledge in so far as it is true knowledge approximates to the condition of mathematics. But any ordered and teachable body of knowledge is ἐπιστήμη in its own degree ; there is no sharp line between metaphysics, logic, mathematics, physics, biology, social science, though some sciences may be less pure than others.

This is the first sophisticated sense of the word "science" in the English language ; but the word was rather late in coming into regular use, and it was preceded by the word "philosophy." One still finds in Oxford and in Cambridge Professors of Natural Philosophy who really are Professors of Physics ; when Adam Smith lectured on the Wealth of Nations he was a Professor of Moral Philosophy ; there are still in Lancashire and elsewhere "Literary and Philosophical Societies" dating from the eighteenth century, which we should now call Literary and Scientific societies. For some time the words

"philosophy" and "science" run parallel courses, but even in the eighteenth century there begins to be a contrast between metaphysics and theology on the one hand, "science" on the other. The latter is coloured by English empiricism so as to exclude what is revealed, transcendent, incapable of proof. By the outset of the nineteenth century, this distinction is well established ; nevertheless, at this stage the word is still one of extremely wide application. Mill (in the first sentence of the *Political Economy*) in effect defines science as "systematic enquiry into the modes of action of the powers of nature" ; he has no doubt that Political Economy is a branch of science, and he devotes the sixth book of his *Logic* to the methods of the "Moral Sciences." In the first half of the nineteenth century Political Science was the obvious name to give to the academic study of Politics ; it was the period of the Association for the Promotion of Social Science, the period of the Moral Sciences Tripos at Cambridge.

This second stage, in which "science" meant unambiguously all organised branches of analytic and empirical study, came to an end in the Darwinian controversies of the 1860's and 1870's. A particular issue of no great importance was dramatised as a battle between "science" and "religion" ; in the context of this controversy "science" meant principally physics, chemistry, biology, geology and astronomy, and a scientist was a man who worked in one of these disciplines, or in other lesser disciplines closely analogous to them. "Science" as thus defined excludes "social science" ;[1] sometimes it even seems to exclude pure mathematics. The word had thus been narrowed down to a fairly small section of human knowledge. The natural scientists had earned immense prestige by their discoveries and by their swift and decisive victory over the theologians. To this they added, less legitimately, the prestige of the Western intellectual tradition, then still embodied in the word "science."

[1]There is a good landmark in the year 1877, when Sir Francis Galton sought to exclude from the British Association for the Advancement of Science the section dealing with the Social Sciences. *Journal of the Royal Statistical Society*, Sept., 1877, p. 468 ; quoted by Mr. S. G. Checkland in *The Manchester School*, Vol. 19 (1951), p. 147.

There followed the period in which "science" was a magic word: the scientist was old priest writ large. This has brought reaction, and in our divided society the word "science" has become ambivalent. In one social world there is a craving for "science fiction," space-ships, supermen, death-rays, scientific socialism and so forth; in another "science" has become almost a synonym for clap-trap. The more sophisticated natural scientists prefer to be known by obscure professional titles, as astro-physicists, cryptogamic botanists, endocrinologists and so forth, and they affect attitudes of absurd diffidence about the extent of their authority. One even finds, in Professor Young's Reith Lectures,[1] a modest attempt to disguise all natural science as social science, on the ground that it involves techniques of communication between men. Social science, on its side, hastens to disclaim the methods and even the name of natural science; London and Cambridge are the only Universities in this country where Professors of Political Science are still bold enough to use that title. In fact, we are passing beyond the attitude to "science" expressed in the search for a "science" of administration; or if we pursue it now, we do not act in quite the same sense as the pioneers. They sought mainly to apply the methods of natural science, but it would be fair to say that their action was affected both by the general prestige of the word "science" and by imprecise recollections of its earlier meanings. It is not till the latest stage that one finds much self-conscious discussion of scientific method.

It would be presumptuous to attempt to say what is the true method of natural science, because this has been one of the staple tasks of philosophy for some three hundred years. But there seems to be an interlocking of two processes, distinguishable but not separate; *first*, a process, more or less mathematical in character, by which definitions are established and their necessary implications are deduced: *secondly*, a process by which experience is made amenable to analysis by mathematics —that is to say, it is made repetitive and countable by some

[1] J. Z. Young: "Doubt and Certainty in Science," Oxford, at the Clarendon Press, 1951.

process of abstraction, either solution from the data or the careful construction of experiments. The two processes can also be distinguished in the ordinary man's way of gaining knowledge : both there and in scientific method the essence of the matter lies not in either process but in their interlocking and mutual adjustment. In this each science has its own methods, of which its own experts are masters and judges ; there are very few useful generalisations about the proper relation between deduction and experiment. It would therefore be senseless to blame pioneers for wrong procedure ; their role was necessarily to fumble for a practical solution adapted to the needs of their own field of investigation. Nevertheless, the distinction between the two processes will serve as a peg on which to hang a description of what has happened and what has gone wrong. It is possible to associate three lines of thought with three names—F. W. Taylor, Henri Fayol, and Elton Mayo ; this will not altogether do them justice, for they were all in their way great men, and there is a great deal of caution and good judgment in their writings which is not reproduced in textbooks which purport to describe what they said. All three are associated primarily with business administration, not with public administration ; there has been much big talk about the application of science to public administration, but serious writing about public administration has been largely descriptive, and its principles have been the axioms of the plain man.

Taylor and Fayol began their preaching campaigns independently and almost simultaneously in the years just before 1900. It may be convenient for the argument to take Taylor first.

Taylor is known to everyone as the apostle of time and motion study, the stop-watch in industry. The common man's visual image of "Taylorism" has been stamped by the film "Cheaper by the Dozen" ; there is a sequence there which shows Taylor's friend, F. B. Gilbreth, buttoning and rebuttoning his waistcoat while Myrna Loy times the operation with a stop-watch. The film is doubtless a travesty but it serves well enough to illustrate what is common to the

development of time-study by Taylor and of motion-study by Gilbreth. These techniques are concerned with actions which can be endlessly repeated without relevant alterations, and which can be analysed into elements such that those elements in turn can be separated, repeated and recombined in various patterns. You can button up your waistcoat in the same way often enough for certain variations to be weeded out as statistically non-significant in relation to any criterion chosen ; you can separate and recombine various movements, left-hand or right-hand, up or down, and so on. To extract general rules from these operations must always require some simple mathematics, and in the higher flights of Taylorism there may be quite advanced exercises in the mathematics of probability. But apart from mathematics, this science has few explicit postulates, and it has not developed any important deductive structure of its own. Its postulates about human psychology and physiology do not seem to be expressed anywhere, but they are certainly unsophisticated and perhaps ambiguous. This has run Taylorism into considerable trouble ; practical trouble, because attempts to apply it have often led to resistance from workers and so to a loss of the advantages predicted ; theoretical trouble, in that experiments carefully designed on Taylor's principles sometimes fail to work consistently, even though there is no conscious resistance by the participants.

These errors are important but not destructive ; within its limits Taylorism has certainly been a correct and successful adaptation of the methods of natural science, and it has immensely modified our attitude to all repetitive operations. Such operations are as common in public administration as in business administration ; time and motion study is as well suited to a Royal Ordnance Factory as to the Nuffield Organisation, and an expert in office routine can do the same job in the Ministry of National Insurance as in the Prudential Assurance Company. This is the staple diet of the Organisation and Methods Division of the Treasury, and "O & M" is now an essential part of the machinery of government.

But surely this is not the science *of* management, but science *for* management—an ambiguity neatly concealed by

the phrase "scientific management ?" Surely repetitive routine operations are not an important part of "administration," whatever "administration" is ? The work of the administrator, even of the administrator at the top, must contain some element of repetition, for otherwise we should not feel, as we do, that there is unity in his work, that there exists somewhere something called "administration" about which we should like to generalise. But this unity is certainly not something that can be timed with a stop-watch. The stop-watch may be an instrument of management, and it is as useful for a manager to learn "scientific management" as to learn cost accounting or the concise and effective use of English. But it is not more useful ; he manages routine operations but he is not himself a routine operator.

The second approach is one to which it is convenient to attach the name of Henri Fayol, because his work illustrates its good points and not its bad ones. The nearest analogy here is that of economic theory. This sort of science begins with postulates and definitions, which are framed as precisely and unambiguously as possible and which seem plausible to common-sense ; these are something like the axioms of Euclid, and from them necessary propositions can be deduced. These derivative propositions will be relevant to experience if two conditions are fulfilled : *first*, that the chosen postulates are more or less correct, *second*, that some unit of account or of measurement can be found by which subject-matter can be related to propositions. Economic theory is said to be a set of variations on the theme that you cannot eat your cake and have it (indeed we are a little tired of talk about "the national cake") ; these variations can be translated into rules for behaviour subject to these two limitations—*first*, there are a good many exceptions to the rule that you can't eat your cake and have it ; *secondly*, it is not always in real life possible to get at the cake and measure it, so as to be sure whether it is being eaten or not. Within these limitations the method is useful as well as elegant. It plays a great part in the natural sciences, above all in physics, and it is worth trying tentatively

in almost any field. Professor Catlin [1] has urged us to try it in politics, and it has been tried fairly seriously in the science of administration. Those who have tried it seem to start from postulates of three kinds.

They need (*first*) a postulate or simplified model for human nature. The game could be played with the very simple eighteenth-century model known as "economic man"; on the whole administrative theorists seem to feel that in their field this is repugnant to common-sense, and they substitute something more complicated. One recent author [2] has a "model man" who is moved by four instincts—love of self, love of affiliation to a group, love of accomplishment, and love of service. This is more realistic than the model of "economic man," but it sets a new problem at the outset, because these four loves are as hard to relate to one another quantitatively as are faith, hope and charity. In seeking a realistic model we may make the structure of deduction useless because it cannot be applied.

Secondly, there must be a definition of administration; that commonly used is to the effect that administration is "the organisation or disposition of men to execute a purpose through specialisation of function." This means that we must expressly or tacitly put more details into our model of man: how far can he specialise, how fast can he learn, how many relations can he simultaneously comprehend; and so on.

Thirdly, there is an assumption about the relation of organisation to purpose. It is probably not essential in this deductive authors invariably choose a utilitarian or to the organisation. But whether it is inevitable or not, deductive authors invariably choose a utilitarian or rationalist or mechanist approach; they postulate a supreme author who creates the organisation for *his* purpose, sets it in motion by *his* command, and measures success in terms of advance towards *his* goal. We thus avoid (and this is one of the eternal merits of utilitarianism) the hard philosophical

[1] "The Science and Method of Politics" (Kegan Paul, 1927); "The Principles of Politics" (Allen & Unwin, 1930).

[2] F. C. Hooper: *Management Survey* (Pitman, 1948), p. 99.

puzzle of "common purpose" ; but in the process a good deal is lost.

Even this limited discussion of these assumptions indicates serious difficulties ; but there is nothing improper about the method. Fayol is saying something true and relevant, though its application is obscure, when he divides administration into five operations or aspects which need not be consecutive : to foresee, to construct an organisation, to set it in motion by command, to co-ordinate its parts while it is in motion, to scrutinise its performance in relation to its purpose. There are also a good many interesting tricks which can be played with the principles of subdivision by function ; staff and line organisation, the different types of functional division, and so on. Yet somehow nothing much has come of this. Time and motion study has advanced beyond Taylor and Gilbreth, but the principles of administration are much where Fayol left them. This is partly because much later writing is so careless as to be disreputable, but there are also inherent difficulties in this approach, quite similar to those which dishearten the economic theorists. For one thing it must have postulates, and postulates are either tautologies or the axioms of common-sense. Tautologies are often very useful, but they invite disrespect ; the plain man's axioms are usually proverbs, and proverbs notoriously contradict one another. These points are discouraging but not fatal ; mathematics and physics are no better off. The crucial difficulty is in the transition from deduction to experiment ; no member of this school has seriously considered that problem. They have not even considered whether administration as they define it is something which can be so simplified or broken down into repetitive elements as to be a possible subject for experiment. The procedure should be, in theory, to take an administrative "proverb" (for instance, that efficiency declines if the manager's span of control covers more than five persons), give precise meanings to each term of it, deduce what would happen if this were true in a case in which the cause can be adequately isolated ; and then to prove or disprove. If the proverb is a good proverb, experiment will not exactly prove

or disprove it ; it will refine it into a more precise and subtle statement—and that new statement will be ripe for deduction and experiment in its turn. This is a procedure of great difficulty, even in natural science ; in administrative science it has not even been tried, and meantime this school can offer only tautologies, proverbs, and deductions from them. Proverbs (as has been said) contradict themselves ; tautologies give no guide to action. It is a tautology to say "efficiency declines if the correct span of control is exceeded" : if one combines this with another tautology, for instance that "efficiency declines if the chain of command is too long," one can arrive by a fairly strict process of reasoning at other propositions, some of which will sound interesting. But if they are fairly stated, they will be like statements in the sort of economic theory which is content to be the "pure logic of choice" ; they will indicate which courses of action are mutually exclusive, not which course of action is right. This will be a service to anyone who finds himself in a situation to which the alternatives are relevant ; but it is not what we expect from natural science. We expect to be told that "in certain circumstances the way to get *A* is to do *B*" ; not that there are six alternative ways, any of which might in unknown circumstances be the right one.

However, these speculations are academic until someone produces a deductive theory worthy of the name, and this has not yet been done. Much has been written, but the authors seem to have muddled it. They have confused tautologies with proverbs, their definitions are vague, their terminology is variable, their logic is weak, and they are intolerably apt to claim the authority of science for their own idiosyncrasies. One is reminded of the conclusion of Kipling's "Brugglesmith" : "Though his feet were not within six inches of the ground, they paddled swiftly, and I saw that in his magnificent mind he was running—furiously running."

This unfortunately has often been the point at which political scientists first meet scientific administration, and what they see of it shocks them.

They are less likely to be repelled by the third school, with which may be associated the name of Elton Mayo. His

work was mainly on the sociology of industry, at the level of the factory worker ; its application to the manager is new and tentative, and it is not certain how it will work out. But enough has been done to show that the attempt is a continuation of traditions long familiar in political science. One of these is the search for an all-embracing science of society, in which political scientists have always been involved : as for instance, in different ways, Aristotle, Machiavelli, Mill, Bagehot, Graham Wallas. The Americans have explored this frontier between sociology and politics more methodically than have the British, but all political scientists talk a sociological language about parties and pressure-groups and public opinion, and they are fairly well aware of the clash between this language and the traditional language of consent, election and representation. We use both, we are bound to use both, and we fuss a good deal about their discrepancy. A similar clash arises when sociology is applied to administration ; and in some ways the issues emerge more clearly there, because it is a smaller field.

There are two problems at the outset. First, there is that of the relation of the manager to his organisation. Literature about the science of administration is addressed primarily to administrators ; there is a proper element of idle curiosity in it, but its excuse for existing is that it will help the administrator to do his job better. Unfortunately the deductive school and the sociological school do not agree about what his job is. This is concealed by their definitions of administration, which look very similar. The older books often opened with a sentence like this : "Administration began when five or six men first combined their efforts to achieve a purpose, for instance to move a great stone" ; and this has passed over intact into the new American text-book in *Public Administration*, of which Dr. H. A. Simon is the principal author. But in passing over it has quite changed its meaning.

Both schools of thought regard administration as combination to effect a purpose. For the deductive school that purpose is solely the purpose of the manager, though of course he may have received it as "policy" from a higher level of decision. The "data" are a purpose and a number of men ;

the manager's job is to organise the men so as to attain the purpose. The manager makes the organisation, but he is himself outside it ; he acts upon it, and he may learn from it, but he is not changed by it. In relation to it, he is God. This view of purpose does not flow from the nature of the deductive method, but from the climate of thought in which it was developed and the readers for whom it was designed ; it was written for those who lived still in an atmosphere of individualism not far removed from that of Herbert Spencer, and it paid a tribute of respect to the legal fiction that shareholders govern directors, directors govern managers, managers give orders to workmen.[1] There is a chain of command ; something called "command" flows through channels which can be marked by little arrows on a chart.

Sociology by its terms of reference proceeds on other assumptions ; its axiom is that social relations exist and can be known. Human beings in so far as they affect one another are in relationship, and their relationships can be studied. The object of the science is to produce rules about the behaviour of human beings in combination, as the object of chemistry is to produce rules about atoms in combination. These rules may claim only a low degree of probability, but within the limits set they will enable us to predict what combinations human beings will form in particular social circumstances. There are difficulties about this ; the only one relevant here is that of the position of the administrator in relation to the group. If he affects the group he is (for the sociologist) in relationship with it ; the more he affects it the more intimately he is a part of it, and the more necessary it is to study him in relation to the group as well as the group in relation to him. These are one social fact, not two. The sociological student of administration sets out to teach managers how to run their businesses better ; he is apt to come back with a set of rules which say how managers are likely to behave, in relation to the various groups to which they belong.

[1]Professor Dwight Waldo's book on *The Administrative State* describes the similar effects of intellectual climate on early studies of public administration in the U.S.A.

The perfect set of rules would say how managers *must* behave—meaning that if they did not behave thus they would in our society cease to be managers very soon.

This dilemma is quite familiar to us in the study of politics. We set out to improve the government of men ; if we follow only the sociological school we come back with generalisations which explain why party bosses must exist, why they behave as they do, and why they would fall from power if they behaved in any other way. Most political scientists have at some stage of their careers been fascinated by the view of politics as an intricate pattern of forces in balance ; but few have been able to rest content with it. Politics is nothing unless it has some relevance to the individual and his purposes, and is in some sense, however limited, under his control.

The second issue is closely related to this point. It seems impossible in ordinary usage to talk about administration except in terms of purpose. We administer to get something done ; if there is no purpose, it is not administration. Yet purpose is particularly hard for the sociologist to handle, a difficulty common to sociology and psychology. Purpose is not a thing which we can directly observe in others. We know—at least we are convinced that we know—our own purposes, and we know what symptoms in our own actions belong to purpose. Other people's purposes we deduce from their actions, and the evidence is often difficult. Our own symptoms may not be typical ; the others may deliberately or by accident mislead us ; and in any case man's actions are never wholly rational. The word "rational" is natural in this context ; the idea of purpose is closely related to that of reason, and the concepts of reason and unreason, conscious, sub-conscious and unconscious, are a fruitful source of puzzles for philosophy and psychology. These difficulties are still present if we look away from the purpose of the manager, and put purpose into the group. The sociological study of administration, as distinct from other sociological studies, would be the study of the organisation of a group in relation to its common purpose.

As political theorists we have been here before. "Purpose" in ordinary speech means the purpose of some person ; whose

purpose is the common purpose of a group? If there is such a thing as common purpose, the group is to that extent a person; if the group is a person, what then are the persons who compose it? If the General Will really is a Will, what becomes of you and me? Perhaps, as it is fashionable to say, it is all a matter of using the wrong language: perhaps the word "purpose" has meaning in regard to the individual, but is merely a source of confusion and false analogy when applied to the group.

The first difficulty, that of the leader who in one sense governs the group, in another sense is governed by it, is a paradox which we meet every day and get over well enough in practice. The second is a much more serious barrier to the sociological study of administration, and the difficulty is not eased by the determined efforts which have been made to outflank it. One successful school of sociology—that associated with Durkheim and with the British tradition in social anthropology—has set up its science on the assumption that the study of society can dispense with the concept of purpose. It has tried to use the language of physiology, not that of introspection. Sociology is treated as an analogue of physiology: purpose is rejected in sociological explanation, as teleology had been rejected by the nineteenth century in biological explanation. For the idea of "purpose," are substituted the ideas of "structure" and "function."

This is an attitude which it is difficult to sustain consistently, and few writers succeed in following their own rules. But the distinction is a real one. "Purpose" implies a relation of means to end. It is a "straight line" relationship; straight lines can be linked, but in such a chain each link is directly related only to its neighbours. "Function" implies a balance of parts interacting within a complex whole which tends towards equilibrium—an interlocking or circular relationship. The classic exposition is that in which Durkheim discusses at length the Division of Labour: the *purpose* of specialisation is to increase the specialist's income, the *social function* of specialisation is to maintain social solidarity. Individuals, as we know, introduce specialisation for their individual purposes:

but if our point of interest is not the individual but society, for us the relevant thing about specialisation is not its relation to individual purposes, but its relation to other social facts.

This need not mean that we forget individual purpose or subordinate individual purpose to social function. The chemist in his profession sets on one side the physics of the atom and looks for chemical relationships. The physiologist thinks of the chemistry of the body in physiological terms of form, structure and function; for the moment it is not his business to trouble about the nature of chemical bonds. Of course chemistry as defined is never quite adequate to the phenomena observed by the chemist; physiology is never quite adequate to the phenomena observed by the physiologist; the process of abstraction is always breaking down, but it is temporarily very fruitful in allowing progress to be made along a new line. Levels of study can be kept distinct, without implying that the thing studied is merely biological or merely chemical or merely physical. One can study the individual or study society without implying that the individual and society are eternally separate and contrasted.

All this is "scientific" in principle; and (so far as a layman can judge) it has had real success in practice. It is true that Elton Mayo's story of the Hawthorne experiment has been told so often that it has become a sort of parable, more apt in sermons than in text-books; and probably there is not a large field in which changes in group relations can be measured by reference to a simple and uniform variable such as industrial output. But these doubts are not fatal to the claim of this sociology to be a science; at most, they suggest that it is moving away from the concept of science as natural science, and back to the wider sense, the "Baconian" sense, in which science includes any orderly empirical study of the natural world.

The new method ought in principle to be applicable to any group in any country; to a jungle village, or a factory, or a government office. Hence the latest theme in the science of administration in the application of this sociological method to administrative groups. That is why we are being made

familiar with the distinction between formal and informal organisation, and are taught to regard informal organisation as logically prior and practically more important. This is part of a general trend of thought ; it is some time since the corresponding school in jurisprudence began to teach that formal law signifies nothing unless it is based on the social reality of custom.

On this analogy, formal organisation is law, informal organisation is custom. Formal organisation is to be found in the organisation chart and in the distribution of duties list, it is imposed by the manager as sovereign, or agent of the sovereign, to serve the purpose of the sovereign. Informal organisation is the structure of the group, and within the group is the manager, the titular sovereign himself ; the group has its status system, its laws of solidarity and expansion, its parts are functionally related, and to its law the manager conforms. If the formal organisation does not fit the law of the social situation, so much the worse for the formal organisation ; it is waste paper.

This is a very summary view of a theme which permits many interesting variations. A good many of them invite detailed discussion ; in the present context it is possible only to consider a few issues which are more general and perhaps less interesting.

There are, to begin with, three difficulties which are in theory not insuperable. In the *first* place, exponents of this new approach do not always play fair. They set out to seek conclusions about social life ; they finish with conclusions about the good life. The good life, they teach, is that of the group ; integration is happiness, extrusion from the group is unhappiness ; unhappiness is the supreme evil, and it is our duty to eliminate it. A line of connection leads from Figgis and other pluralists, through the guild socialists and Miss Follett, to Elton Mayo and to much sociology which claims to be science and not philosophy. The science of groups can probably be disengaged from the ethics of groups ; but no-one has done it yet, and till it has been done this school of thought will repel many whose ethical presuppositions differ from theirs.

These remarks refer primarily to general sociologists of this school; in addition, the ethics of sociology have particularly odd effects when carried over into administration. To put the case concretely, is it the duty of miners to be happy or to produce coal? Of soldiers to be happy or to win wars? Of civil servants to be happy or to govern well? It is well enough to say that some integrated groups find happiness in efficiency; unfortunately other groups are equally happy, their morale is first-rate, and their contribution to the larger community is zero. Perhaps in time we may learn how to make the miserable happy and how to make the happy both industrious and good; but at present our repertoire of tricks is limited, and we find ourselves driving on the laggards by appeals to duty—duties towards the State, duties towards one's class, duties towards humanity. Such exhortations are generally ineffectual, but everyone knows what they are meant to convey, and admits that in some circumstance or other they ought to be obeyed. In fact, it is not easy to find in modern society any group which is effectively self-contained: most men and women belong to many groups, and relations cutting across group boundaries are often more important than those within them. This is true at moments of crisis even for groups engaged in industrial production, which may still be relatively isolated in normal times; it is continuously true for public administration. Civil servants, it is true, are often deeply moved by group loyalty and departmental loyalty; but our main interest in studying the administrative group is to discover how to keep these partial loyalties within bounds. Pluralism will not do as an ethic for public servants.

Secondly, it is not derogatory to the important work which has been done on the sociology of industry to say that it is not the sociology of industrial administration; it is related to industrial administration only as social anthropology is related to colonial administration. So far the social anthropologists, though they have thought a lot, have said little about the sociology of white administrators in primitive countries; industrial sociologists and social psychologists have been equally shy in investigating the business man and the

entrepreneur. There has been much talk but few experiments ; good sociological books on administration are generally written by men like Mr. Chester Barnard, who use the language of industrial sociology to describe their own experience. This is a fascinating game ; sociological language allows us for the first time to talk academically about things like "empire-building," "coffee-housing," office furniture, and office geography, things which we knew from experience to be important, but had hitherto been forced to classify as light relief.[1] This is a real gain ; it makes it possible to talk impersonally about highly personal matters, it may make it a little easier to explain to beginners what they are likely to find in an administrative office, it may even help administrators to think more clearly about their own problems.

All this is valuable ; but the science of administration cannot grow out of the practice of administration unless empirical research is possible, and there are a good many practical difficulties about that. The managing director is likely to be a more elusive and recalcitrant guinea-pig than the factory operative. After all, what is *he* to get out of it ? Even the fact of investigation may damage prestige, which is one of the administrator's main assets in dealing with his staff, his public and his superiors. As has been said so often, the social investigator is a factor in the situation which he investigates, and the investigator of higher administration will not get far unless his presence adds to the prestige of higher administration. It would be wise for the present to avoid "bad cases," cases in which there is public criticism and internal uncertainty, and to find administrators who are in their own and other men's estimation good administrators. It is on this basis that the researcher is most likely to be welcome, and that he is most likely to learn.

The *third* practical difficulty is that of recording experience in an impersonal way. Most situations in public administration, and even in business administration, are extremely complicated, and different observers see different things in them;

[1]Or to treat them satirically, as Cornford treated them in *Microcosmographia Academica*, and Balchin in *The Small Back Room*.

it would be possible for two honest and accurate historians to write quite different stories of the action taken by a government department in one day at a crisis of its history. Notionally, there are two ways of overcoming this, which can be used singly or in combination. One is to train all researchers in a single school of thought, so that their interests are alike ; they look for the same things and use the same language to describe them. The other is to abandon the study of big administration, and to look for very simple instances of administrative situations ; even perhaps to create them artificially. The second trick is difficult to arrange ; the first is all too easy. Schools of sociology tend to harden into cliques which are mutually hostile and unintelligible. What is more, they slip back easily into reliance on deduction as against observation ; they are back in the "spectral woof of impalpable abstractions," the "unearthly ballet of bloodless categories," [1] from which they had hoped by science to break free.

These difficulties are quite serious ; it is not easy to exclude ethics, to establish the atmosphere of confidence which is necessary to research, to maintain impersonality and objectivity in recording observation. But supposing them to be overcome, will the sociology of administration be the science of administration which we set out to find ? The methods of sociology have been very successful in describing the work of offices and factories in terms of status, communications, and group solidarity ; they have not been at all successful in dealing with the process of planning or with the place of the public in relation to the administrative group. Perhaps this is not accidental, but a necessary consequence of the procedure adopted by the science of sociology. The idea of administration, like the idea of government, cannot be separated from that of purpose ; this form of sociology has made progress only by substituting for purpose the concept of function. Our trouble, as students of administration, is that we want to hold on to both. If we lose hold of purpose we cannot understand the administrator, because his role is to organise other men for a purpose which is not theirs ; he is the

[1] F. H. Bradley, *Principles of Logic* (2nd ed.), Vol. II, p. 591.

government, the purpose is his purpose, even if he pursues it in the interests of the governed and under their influence. But if we lose hold of function we are back in the old view of men as atoms, which is both false and ethically repugnant.

In this the student of administration is no worse off than other students of politics. Politics is primarily concerned with the giving of direction to human affairs. As Professor Laski used to say, the politician is the man who "injects a stream of tendency" into affairs; so is the administrator. But politics must reckon also with the facts of the situation; the politician who ignores the laws of social equilibrium will come unstuck—so will the administrator. Is it then right to say that the study of administration is an inseparable part of political science?

This is too large an issue to pursue here. But it is safe to say that political scientists have perplexed themselves for centuries by attempting to hold together in one view two conceptions of the nature of politics, and that administrative scientists now find themselves in the same dilemma. If the analogy holds good, we cannot expect to find a science of administration based on the analogy of natural science, nor even one based on the wider eighteenth century conception of scientific method. We can find science *for* administrators, and it is to be hoped that we shall; but the only science *of* administration will be science in the oldest sense of the word. It will be an organised body of knowledge which can be taught, but it will not claim that it conforms closely to the model of natural science, that it is in all its parts verifiable, or that it is infinitely progressive. Administrative science, in fact, will be political science, and the political scientist is in his profession condemned to live for ever upon the frontier between two worlds, the world of philosophy and the world of natural knowledge. This is a position of discomfort and responsibility: but that (after all) is politics.

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A NOTE ON BOOKS.

This article was written as a lecture, and few references are given in the footnotes. It may be useful to the political scientist to have a rather fuller reading list; this is not in any sense a bibliography.

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British Social Income Estimates, 1938-1950[1]

The first Command Paper on National Income and Expenditure was published in April 1941, followed at annual intervals by ten similar Command Papers, all appearing on or before Budget Day. The first paper (Cmd. 6261) comprised 16 pages and eight tables ; the eleventh (Cmd. 8203), issued in April 1951, contains 80 pages and 38 tables. That growth will undoubtedly continue. We are already promised some statistics about profits in individual industries and we can confidently hope that the fact gathering net of the interim index of production will ultimately be spread so wide and become so efficient that direct estimates of national real output will become possible. If one compares the successive White Papers with one another, the progress made from small and uncertain beginnings to the present massive and more reliable results gives cause for satisfaction.

Great though the progress was, there is room and need for even greater progress in future. So far all advance has been confined to the analysis of streams of money incomes and expenditures of current values. The vital estimate of physical output is yet to come. It alone will make intertemporal and interspatial comparisons and calculation of sectional price levels possible. Those output estimates will have to be supplemented by an attempt to provide current information about the industrial circulation in the form of input and output tables similar to those invented by Wassily Leontief.

Once we have detailed output and input tables, we shall be able to watch the changes in the earlier stages of production and circulation of goods before the final stages are affected. This will be a notable advance. We shall also be able to calculate the component parts of the industrial circulation and watch the cumulative propagation of inflationary pressures more accurately. We shall also be able to get current estimates

[1]I am indebted to Messrs. H. Biggs and A. Davies of Manchester University for help in the calculations.

of the financial circulation. The final triumph will come when current estimates of such dynamic parameters as the various marginal accelerators and multipliers can be made so as to guide the policy makers in their decisions.

We mention these possible future developments only to make clear that in spite of all our advances, we are still only at the beginning of serviceable national income estimates.

Nor must we overlook the imperfections in our present estimates of income and expenditure streams. These are twofold : (1) Personal, corporate and public savings are still indirectly estimated as residuals and (2) the reliability of all estimates is still low.

Up to April 1950 gross investment also was estimated as a residual, and was consequently unreliable. The National Income White Paper published in April 1950 (referred to below as W.P. 1950) was the first to give direct estimates of gross investment expenditures, *i.e.* for 1948 and 1949. The White Paper published in April 1951 (referred to below as W.P. 1951) gave revised estimates for 1948 and 1949 and a new direct estimate for gross investment expenditure in 1950. This is a great step forward. All subsequent estimates of gross investment will be direct estimates.

Up to October 1950 the estimates of net investment abroad by the United Kingdom were erroneous because of unsuitable presentation of the balance of payments by Exchange Control. The United Kingdom Balance of Payments (Cmd. 8065, Oct. 1950) was the first to reclassify the inward and outward payments so as to fit them better for inclusion in national income accounts. Previously the estimates included many capital items in the current account. But even to-day the subdivision of inward and outward items into income and capital items is to some extent merely based upon a 'strong presumption.' This is due primarily to lack of full knowledge of the movements of funds between U.K. and the rest of the sterling area. Only the transfers between the sterling and non-sterling area are accurately known. But the area of doubt is comparatively small. Cmd. 8379 states (p. 32) : "In 1948 the balancing (capital) then pointed to an unidentified outflow

to various parts of the sterling area of rather under £50 million, and, in 1949, rather under half this figure. In 1950 it pointed to an inflow of somewhat over £100 million and, in the first half of 1951, to a small net outflow." Moreover, many of the government transactions which are regarded as current account items in the last three Balance of Payments Cmd. papers (8065, 8201, 8379) are, from a more rigorous analytical point of view, capital items—a fact which is admitted in Cmd. 8065 which declares (p. 5) that the fulfilment of inescapable governmental commitments "may in whole or in part be treated as receipts on 'capital account'."

Once reliable direct estimates of all items of the national income are available, the national income and expenditure estimates will of necessity contain an item of "residual errors." This need not cause any mental discomfort, for it will betoken advance. It will be understood that the residual error is the sum of the errors contained in all items and not just in saving as at present. The mere existence of this residual error will moreover be a constant challenge to improve all estimates so as to reduce it to a negligible few millions.

The general argument presented so far points to the likelihood that the imprecision of the indirect estimates is large. Internal evidence is available in support of this contention. Each successive White Paper gives estimates for a varying number of years. It can be seen from Table I below that the White Paper published in April 1941 (W.P. 1941) gives estimates for 1938 and 1940, and that published in April 1947 for 1938 to 1946 inclusive. The successive estimates for the same item and the same year, *e.g.* gross investment in 1938, differ from White Paper to White Paper. This is partly due to slight changes in definition but much more to a more painstaking analysis of the implications of the same definitions, and to availability of more and better information, awareness of gaps in our knowledge, better estimating procedure and to the belated discovery of omissions and wrong inclusions.

Considering the paramount importance of gross investment (V), net investment (I) and depreciation of capital (D_K) we present in Table I the complete conspectus of the varying

TABLE I

INVESTMENT IN U.K.

Columns : Estimates of Gross Investment (V), Depreciation (D_K) and Net Investment (I) for Different Years contained in the same White Papers on National Income (W.P.) specified by year of publication.

Rows : Estimates of V, D_K and I for Same Year as given in Successive White Papers.

Year		W.P. 1941	W.P. 1942	W.P. 1943	W.P. 1944	W.P. 1945	W.P. 1946	W.P. 1947	W.P. 1948	W.P. 1949	W.P. 1950	W.P. 1951
1938	V					785	780	770	747	770	770	765
	D_K					440	475	450	450	450	450	457
	I	210[a]	406	287	305[b]	345	305	320	320	320	320	308
1939	V					827	826	759				
	D_K					450	485	460				
	I				362[b]	377	341	299				
1940	V					541	364	268				
	D_K					465	505	480				
	I	—949[a]	—286	— 22	109[b]	76	—141	—212				
1941	V					394	170	176				
	D_K					475	515	490				
	I		—493	—200	— 82[b]	— 81	—345	—314				
1942	V					397	283	202				
	D_K					475	520	500				
	I			—173	—140[b]	— 78	—237	—298				
1943	V					352	251	198				
	D_K					475	520	500				
	I				—175[b]	—123	—269	—302				
1944	V					287	211	97	6			
	D_K					475	520	500	500			
	I					—188	—309	—403	—494			

TABLE I—INVESTMENT IN U.K.—*Continued*

Columns : Estimates of Gross Investment (V), Depreciation (D_K) and Net Investment (I) for Different Years contained in the same White Papers on National Income (W.P.) specified by year of publication.

Rows : Estimates of V, D_K and I for Same Year as given in Successive White Papers.

Year		W.P. 1941	W.P. 1942	W.P. 1943	W.P. 1944	W.P. 1945	W.P. 1946	W.P. 1947	W.P. 1948	W.P. 1949	W.P. 1950	W.P. 1951
1945	V						534	631	539			
	D_K						520	510	550			
	I						14	121	— 11			
1946	V							1,314	1,255	1,285	1,375	1,335
	D_K							600	725	700	675	710
	I							714	530	585	700	625
1947	V								2,020	2,040	2,266	2,185
	D_K								775	750	750	785
	I								1,245	1,290	1,516	1,400
1948	V									2,352	2,590	2,370
	D_K									825	775	845
	I									1,527	1,815	1,525
1949	V										2,465	2,337
	D_K										975	1,027
	I										1,490	1,310
1950	V											2,627
	D_K											1,124
	I											1,503

Explanations : [a] *Inclusive of investment abroad.* [b] *Includes war losses made good.*

estimates contained in all eleven White Papers. The vertical columns contain the estimates of V, D_K and I given for different years in the same White Paper. The horizontal rows give the various estimates for V, D_K and I for the same year contained in different White Papers. There are no less than eleven estimates available for V, D_K and I of 1938. In 1947 the habit of giving retrospective estimates for 1939 to 1945 stopped and since then we have fewer retrospective series.

In order to compare like with like we have not quoted the gross and net investment figures contained in W.P. 1951 as given there. This White Paper revised the definition of gross and net investment so as to make it coterminous with actual expenditure on newly produced gross investment goods. This means that any appreciation of stocks (or extra cost of replacing inventories, due to a rise in prices) is excluded (deducted) from profits and gross and net investment ; conversely any depreciation of stocks (or saving in cost of replacing inventories due to a fall in prices) is included (added) to profits and gross and net investment. In all previous White Papers gross and net investment in inventories was stated at replacement cost at the end of the year, *i.e.* inclusive of stock appreciation and exclusive of stock depreciation. To achieve comparability we have adjusted the figures for 1938 and for 1946 to 1950 taken from W.P. in 1951 in accordance with the old definitions. The adjustments were for the six years :—80 ; +100 ; +350 ; +250 ; +40 ; +350.

The estimates of net investment for the year 1938 and for the war years 1940 to 1945 show violent fluctuations. This is mostly due to belated availability of data. But even the post-war estimates are astonishing in their disparity. Take 1946 for example. Gross investment (V), depreciation (D_K) and net investment (I), vary violently from W.P. 1947 to W.P. 1951. The estimates for the years 1947 to 1949 vary even more. Notice especially the revisions between W.P. 1950 and W.P. 1951 !

There can be no doubt whatsoever that even imperfect direct estimates for the years 1937 to 1947 would not have shown

TABLE II

SAVINGS AND TAX RESERVES IN U.K.

Columns : Estimates of Net Personal Savings (S_p), Net Corporate Savings (S_b), Net Public Savings (S_g), Tax Reserves of Persons (TR_p) and Corporate Tax Reserves (TR_b), for different years contained in the same White Paper on National Income (W.P.) specified by year of publication.

Rows : Estimates of S_p, S_b, S_g, TR_p, TR_b, for the same year as given in successive White Papers.

Year		W.P. 1947	W.P. 1948	W.P. 1949	W.P. 1950	W.P. 1951
1938	S_p	153	154	143	139	144
	S_b	170	170	170	170	172
	S_g	— 89	— 89	— 78	— 81	— 4
	TR_p	4	3	5	5	12
	TR_b	12	12	10	10	5
1946	S_p	667	717	678	658	698
	S_b	210	260	285	335	301
	S_g	—705	—915	—896	—896	—793(*a*)
	TR_p	— 21	—85	—115	— 55	— 73
	TR_b	—135	—125	— 45	— 15	— 32
1947	S_p		445	165	276	230
	S_b		320	405	495	450
	S_g		—441	—341	—405	—222(*a*)
	TR_p		50	60	30	1
	TR_b		—110	65	202	205
1948	S_p			6	195	103
	S_b			540	575	524
	S_g			427	495	659(*a*)
	TR_p			90	5	— 7
	TR_b			165	191	161
1949	S_p				174	103
	S_b				530	487
	S_g				492	755(*a*)
	TR_p				30	29
	TR_b				— 22	— 43
1950	S_p					134
	S_b					569
	S_g					864
	TR_p					26
	TR_b					92

(*a*) *Obtained after deducting taxes on capital (estate duties, etc.).*

similarly large oscillations. The high imprecision of merely residual estimates is, of course, inevitable.

A similar impression emerges from an examination of the various estimates of savings, all of them mere residuals. Personal net savings (S_p) are here defined as savings arising after tax on capital has been paid and personal tax reserves (TR_p) put aside. Corporate savings (S_b) are inclusive of stock appreciation, but exclusive of tax reserves (TR_b). Public savings (S_g) are inclusive of tax on capital.

Space prevents us from giving the full table. We shall confine ourselves to the five White Papers appearing from 1947 onwards and to the years 1938 and 1946 to 1950.

The fluctuations exhibited in this table reach fantastic proportions. The personal net savings for 1947, 1948 and 1949 fluctuate so violently that the fluctuations of corporate savings during the same year appear as extremely moderate. The personal net savings for 1948 jumped from £6 mill. in W.P. 1949 to £195 mill. in W.P. 1950 ! 32·5 times as much ! Tax reserves show a tendency to change signs as well as magnitude. Thus corporate tax reserves in 1947 change from —£110 mill. in W.P. 1948 to +£205 mill. in W.P. 1951, and personal tax reserves for 1948 change from +£90 mill. in W.P. 1949 to —£7 mill. in W.P. 1951 !

What the above observations conclusively show is that residual estimates must at once be replaced by direct ones, if reliability is to be improved. But lest we should remain content with this conclusion, let us look at a vital direct estimate—based upon Inland Revenue data—to ascertain whether the difference in the precision of a direct and indirect estimate is so large as to amount almost to a difference in kind. We choose home generated profit, inclusive of all interest save that on national debt and inclusive of stock appreciation. We confine Table III again to the five White Papers 1947 to 1951.

TABLE III

HOME-GENERATED PROFIT AND INTEREST IN U.K.

(Exclusive of Interest on National Debt but Inclusive of Stock Appreciation).

Columns : Estimates of Profits and Interest for different years contained in the same White Paper on National Income (W.P.) specified by year of publication.

Rows : Estimates of Profits and Interest for the same year as given in successive White Papers.

Year	W.P. 1947	W.P. 1948	W.P. 1949	W.P. 1950	W.P. 1951
1938	1,368	1,404	1,154	1,152	1,160
1946	2,370	2,465	2,384	2,292	2,378
1947		2,785	2,641	2,694	2,772
1948			3,134	2,974	2,960
1949				2,930	2,935
1950					3,208

The fluctuations in these direct estimates are noticeably smaller than those of estimates of residuals. Nevertheless they are substantial in absolute amounts. Take profits for 1938. They fell from £1,404 mill. in W.P. 1948 to £1,154 mill. in W.P. 1949. Or take profits for 1948. They varied between £3,134 mill. in W.P. 1949 and £2,960 mill. in W.P. 1951, a difference of £174 mill !

II

We have so far been concerned with the problems of estimating procedures and the precision of the resulting estimates. We shall now carry forward our survey of the achievements manifested in the eleven White Papers on the National Income and Expenditure by examining numerical results for 1938, the last complete peace-time year, and the years 1946-1950 inclusive when peace conditions of a sort returned. Unless otherwise stated, all values are taken from W.P. 1951.

The most fundamental social aggregates are aggregate supply and demand or the Keynesian Z and D. They contain three impurities or "tares" compared with national income at factor cost, namely depreciation, net tax cost (or indirect taxes minus subsidies) and the import component. It is surprising that the White Papers do not attempt to calculate aggregate demand or supply. All macro-economic writings employ the terms assiduously, especially full employment theory, monetary theory, tax theory and balance of payments theory, investment and savings theory and their respective policy counterparts. Yet most students of national income estimation would probably be puzzled when suddenly asked to calculate aggregate demand for any year. This lack of familiarity with the precise meaning of this basic social aggregate is the result of the analytical preoccupations of national income estimators. They prefer estimates of income at factor cost. They feel unhappy if asked to introduce impurities, such as depreciation or net tax cost, and they have a most strenuous objection to the inclusion of imports. Yet it is only if all three of these impurities are included that the value of the finished output at current market prices, *i.e.* aggregate demand or supply, is obtained.

The objection to the concepts of aggregate demand and supply would probably be less severe if it were realised how easy it is to pass from it to the next two most important social aggregates. The one is home produced income and output which can simply be written as $(Z - M)$ or $(D - M)$ or in words : aggregate supply (Z) minus imports (M), or aggregate demand (D) minus imports (M). This home produced income contains only two impurities, *i.e.* depreciation and net tax cost. The other fundamental social aggregate is the home-used income and output which can be written $(Z - X)$ or $(D - X)$ or in words : aggregate supply (Z) or demand (D) minus exports (X). The full equation for the home-used output and income is as follows :

$$(Z - X) \equiv (D - X) \equiv Y + D_K + T + (M - X)$$
$$\equiv Y + D_K + T + (P_i - P_o) + (K_i - K_o)$$

where Y = factor incomes, D_K = depreciation of capital, T = indirect taxes minus subsidies, P_i and K_i stand for

inward payments of property income and capital from the outside world, and P_o and K_o for the corresponding outward payments. Like aggregate demand, the home-used income is nowhere calculated in the White Papers.

We shall now attempt to show by means of Tables IV to VIII that the concept of aggregate supply and demand is extremely well suited for an analytical survey of National Income estimates for several years. These tables (mainly derived from W.P. 1951) form an interrelated whole. Between them they show the totality of the national income forming processes.

We shall employ the term "outturn" to denote the value of all finished goods arriving in home markets in the course of a year, *i.e.* the sum total of finished consumption goods, gross investment goods, government goods, and export goods (the term goods is here used to denote commodities as well as services). An export good is called finished when it is in the particular physical state in which it is being shipped abroad. The term outturn includes always all three impurities (depreciation, net tax cost and import component) while the term output does not. By convention the term net output means output at factor cost and gross output includes only depreciation as an impurity.

Aggregate supply or aggregate demand is equal to the cost of outturn, *i.e.* the remuneration of the ultimate home and foreign inputs which Table IV shows for 1938 and the five post-war years 1946-50. (Col. 2). Cols. 3 and 4 show the total labour cost of outturn. Employers' insurance contributions are shown as part of the labour cost. This treatment (first adopted in W.P. 1951) is analytically correct as the employer would require that the marginal net product of a worker be equal to the wage which he pays out to the worker plus the contribution which he has to pay on his behalf. Cols. 3 and 4 show also the percentages of labour cost as a proportion of the market value of the total outturn. It varies between 44·77% in 1938 and 46·22% in 1948. On the whole the percentage has been remarkably steady, though it has fallen slightly since 1948. Col. 5 shows rent of land and

buildings which has increased only slightly in absolute magnitude but has decreased substantially as a percentage of the market value of outturn. The rent cost in 1938 was still 6·26% but in 1950 it had fallen to 3·04%. Cols. 6-8 give the profits part of the total cost of outturn. Col. 6 is really a mixture of income from work and property and consists of professional earnings, income from farming and profits from other sole proprietorships and partnerships. The three columns together show considerable variation in absolute magnitudes and in percentage of total market value of outturn over the six years. The 1938 percentage of profits was 17·45%, while the 1947 percentage was 21·08%, which is an increase of 20·8% in terms of 17·45% as 100. However the profit percentage moved downwards after 1947 and reached a low point of 19·16% in 1949.

Col. 9 shows fluctuations in the absolute and relative amounts of depreciation. It must be pointed out, however, that the estimates of depreciation contained in the White Papers are wholly unsatisfactory. For they consist chiefly of depreciation as allowed under the rules of the Inland Revenue Authorities. When initial allowances were first introduced in 1946 and when they were raised to 40% in 1949 depreciation provisions jumped upwards both absolutely and relatively. If, as common-sense and economic theory require, depreciation were calculated on a replacement cost basis, the provisions shown in Col. 9 would all be much higher and would exhibit a continuous upward trend in sympathy with the trend of the cost of gross investment goods. This revision of depreciation provisions would necessitate numerically equal downward revision of profits, as profits are overstated to the same extent as depreciation provisions are understated. Col. 10 shows appreciation or depreciation of stocks of working and liquid capital goods with the sign reversed. This amounts in fact to an adjustment of profits which was first introduced in W.P. 1951. It is fully in accordance with the theory of estimating national income. Strictly speaking all prices should be held constant during the period for which the national income is calculated, *e.g.* for a calendar year. This applies to

TABLE IV

COST OF OUTTURN = REMUNERATION OF ULTIMATE (HOME AND FOREIGN) INPUTS

Year	Cost of Outturn	Wages and Salaries and Pay of Armed Forces	Employers' Insurance Contributions	Rent of Land and Buildings	Mixed Work and Property Incomes	Company Profits	Public Profits	Depreciation	Appreciation (—) or Depreciation (+) of Stock	Indirect Taxes Minus Subsidies and Customs Duties	Imports	Customs Duties
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1938	6,649	2,923	54	416	588	536	36	457	80	362	971	226
	100%	43.96%	.81%	6.26%		1,160 17.45%		6.87%	1.20%	5.44%	14.60%	3.40%
1946	11,981	5,460	84	438	1,088	1,224	66	710	—100	566	1,824	621
	100%	45.57	.70%	3.66%		2,378 19.85%		5.93%	—.83%	4.72%	15.22%	5.18%
1947	13,151	5,887	113	456	1,155	1,527	90	785	—350	537	2,160	791
	100%	44.76%	.86%	3.47%		2,772 21.08%		5.97%	—2.66%	4.08%	16.42%	6.01%
1948	14,338	6,471	157	470	1,232	1,580	148	845	—250	654	2,213	823
	100%	45.13%	1.09%	3.28%		2,960 20.64%		5.89%	—1.74%	4.56%	15.43%	5.74%
1949	15,318	6,826	195	483	1,291	1,488	156	1,027	—40	667	2,412	813
	100%	44.56%	1.27%	3.15%		2,935 19.16%		6.70%	— .26%	4.35%	15.75%	5.31%
1950	16,314	7,220	198	496	1,329	1,692	187	1,124	—350	697	2,816	905
	100%	44.26%	1.21%	3.04%		3,208 19.66%		6.88%	—2.14%	4.27%	17.26%	5.55%

the prices of finished goods and services as well as to the stocks of inventories and the stock of instrumental goods. Practical difficulties, however, and other considerations rule out the recalculation of finished output at constant market prices in the course of a calendar year so that only inventories and instrumental goods are valued at constant prices, *i.e.* inventories at the average of the prices ruling at the beginning and at the end of the year and instrumental goods at original costs. The estimates continued in Col. 10 are naturally very tentative and they show considerable fluctuations, as one would expect. In 1938 the value of stocks decreased in the course of the year due to a price slump ; and consequently profits were understated, and the revision in Col. 10 takes the form of an addition of £80 million to profit. The price inflation after 1945 accounts for the continuous appreciation of stocks, the consequent overstatement of profits and the appropriate deduction in Col. 10. It will be seen that this revision of profits varies from ·26% of total cost of outturn in 1945 to 2·66% in 1947.

Col. 11 contains estimates of indirect taxes minus subsidies and custom duties, in other words, of the internal net tax cost of outturn. It will be seen that, contrary to expectations, the internal net tax cost percentage has decreased since 1938 from 5·44% to 4·27% in 1950. Customs duties stated in Col. 13 show the opposite tendency. They have grown much faster than the internal net tax cost, and customs duties as a percentage of the market value of outturn have risen from 3·40% in 1938 to 6·01% in 1947 since when they have fallen again to 5·55% in 1950. The value of imports is stated in Col. 12. Although the volume of imports has fallen considerably as will be shown later, the value has risen steadily. By 1950 the import cost had risen to 17·26% of the market value of outturn as compared with 14·60% in 1938. This percentage will continue to rise.

Table V contains the breakdown of the cost of outturn into those parts incurred in three production sectors, *i.e.* households and non-profit-making bodies, businesses (including public corporations), and public authorities. Col. 3 shows the

TABLE V

COST OF OUTTURN IN THREE PRODUCTION SECTORS

Year	Cost of Outturn	Wages and Salaries + Emps. Ins. Contrib. of Households and Private Non-Profit Making Bodies	Wages and Salaries and Emps. Ins. Contrib. of Businesses	Rent of Business	Profits of Business	Provisn. for Stock Appreciation of Business	Depreciation of business	Indirect Taxes Less Subsidies of Business	Imports of Business	Wages and Salaries and Emps. Ins. Contrib. of Public Authorities	Rent	Profits of Departmental Public Enterprises	Provisn. for Stock Appreciation	Depreciation of Public Authorities	Indirect Taxes less Subsidies on Govt. Goods	Imports of Public Authorities
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1938	6,649	[162]	[2,487]	[392]	1,131	80	367	577	959	[328]	[24]	29	—	90	11	12
1946	11,981	[159]	[4,291]	[424]	2,325	—75	623	1,158	1,351	[1,094]	[14]	53	—25	87	29	473
1947	13,151	[170]	[4,874]	[410]	2,685	—285	690	1,301	1,863	[956]	[46]	87	—65	95	27	297
1948	14,338	177	5,464	[389]	2,881	—200	750	1,446	2,075	987	[81]	79	—50	95	26	138
1949	15,318	150	5,813	[398]	2,863	—30	930	1,453	2,284	1,058	[85]	72	—10	97	27	128
1950	16,314	149	6,144	[411]	3,124	—285	1,022	1,570	2,695	1,125	[85]	84	—65	102	32	121

Figures in brackets were estimated.

cost of labour services to households and private non-profit-making bodies. Cols. 4 to 10 show the cost of outturn of all commercially directed businesses, *i.e.* sole proprietorships, partnerships, public and private companies, industrial and provident societies and public corporations (including nationalised industries). Cols. 11 to 17 show the value of the self-provided output of public authorities, *i.e.* partly the cost-value of tax-financed administrative services and partly the value added to purchases by the trading activities of the Ministry of Food, Board of Trade and Ministry of Supply and departmental enterprises such as Post Office, local authority enterprises, Port of London Authority and the Mersey Docks and Harbour Board. If this self-provided output of public authorities is deducted from the value of government expenditure on goods stated in Col. 9 of Table VIII, the purchases by public authorities of finished goods and services from the private sector are obtained, *e.g.* £798 mill. in 1950.

Table VI transforms the cost of outturn into "expendable incomings." The chief transformation involved is the substitution of the right-hand side of the following equation for the import cost :

$$M \equiv X + (P_i - P_o) + (K_i - K_o)$$

where M = imports ; X = exports ; $(P_i - P_o)$ = balance of inward minus outward payments of property income. $(K_i - K_o)$ = balance of inward minus outward capital payments.

Row 2 gives the expendable incomings which are identical with the cost of outturn and the aggregate demand and supply. These expendable incomings are now subdivided into three expenditure sectors.

Rows 3 to 12 are designed to show how personal disposable gross income is arrived at. The expression "personal" here refers to consumers and consumer-business-men ; these being sole proprietors and partners who very often do not keep separate accounts for their households and businesses but regard them as a unity. The term disposable gross income refers to sums of money which are either spent on consumption goods or saved or put aside as depreciation provisions.

TABLE VI

EXPENDABLE INCOMINGS, SECTORISED AFTER INTER-TRANSFERS (INCLUDING TAX)

	1938	1946	1947	1948	1949	1950
(2) Expendable Incomings	6,649	11,981	13,151	14,338	15,318	16,314
(3) Wages and Salaries and Forces Pay and Emps. Ins. Contribs. and Mixed Incomes	3,565	6,632	7,155	7,860	8,312	8,747
(4) Stock Appreciation of Persons...	20	—20	—35	—65	—23	—80
(5) Depreciation of Sole Proprietorships and Partnerships	177	253	280	305	378	415
(6) Rent of Persons	254	273	242	220	223	234
(7) Dividends and Interest from Companies and Public Corporations	569	767	853	874	891	918
(8) Overseas Property Incomings minus Outgoings	100	32	—1	—1	13	35
(9) Public Transfer Incomes ...	276	903	741	706	737	763
(10) Public Debt Interest Accruing to Persons	188	382	361	340	331	345
(11) Personal Direct Taxes incl. Nat. Ins. Contrib. by Employees and Employers	—403	—1,314	—1,299	—1,420	—1,531	—1,563
(12) Personal Disposable Gross Incomes	4,746	7,908	8,297	8,819	9,331	9,814
(13) Trading Profits of Companies and Public Corporations ...	543	1,237	1,530	1,649	1,572	1,795
(14) Stock Appreciation of Companies and Public Corporations	60	—55	—250	—135	—7	—205
(15) Corporate Depreciation ...	190	370	410	445	552	607
(16) Rent of Companies and Public Corporations	138	151	168	169	175	177
(17) Overseas Property Incomings minus Outgoings	54	17	—1	—0	10	26
(18) Public Debt Interest Accruing to Companies and Public Corporations	103	210	247	261	270	266

[continued

TABLE VI—*Continued*

	1938	1946	1947	1948	1949	1950
(19) Dividend and Interest Minus Transfers to Persons	—569	—767	—853	—874	—891	—918
(20) Direct Taxes on Companies and Public Corporations	—92	—579	—436	—520	—692	—685
(21) Receipts of Public Capital Transfers minus Payment of Capital Taxes	—71	160	155	—10	—15	—43
(22) Disposable Gross Income of Companies and Public Corpors.	356	744	970	985	974	1,020
(23) Government Income from Profits	29	53	87	79	72	84
(24) Stock Appreciation of Govt. ...	—0	—25	—65	—50	—10	—65
(25) Government Depreciation ...	90	87	95	95	97	102
(26) Rent of Government	24	14	46	81	85	85
(27) Overseas Property Incomings minus Outgoings	9	2	—0	—0	4	13
(28) Receipts of Direct Tax on Incomes	495	1,893	1,735	1,940	2,223	2,248
(29) Indirect Taxes minus Subsidies...	588	1,187	1,328	1,472	1,480	1,602
(30) Public Debt Interest	—291	—592	—608	—601	—601	—611
(31) Transfers Incomes to Persons ...	—276	—903	—741	—706	—737	—763
(32) Transfers to Private Capital Accounts Less Taxes on Capital	71	—160	—155	10	15	43
(33) Disposable Gross Income of Public Authorities	739	1,556	1,722	2,320	2,628	2,738
(34) Exports of Goods and Services...	738	1,429	1,617	2,184	2,415	2,971
(35) Incoming Capital minus Outgoing	70	344	545	30	—30	—229

Rows 13 to 22 show the corporate disposable gross income, *i.e.* the retained gross income of public and private companies and autonomous public corporations (exclusive of departmental enterprises of central and local government). This corporate disposable gross income is wholly available for saving and depreciation provision. Rows 23 to 33 finally show the genesis of governmental disposable gross income. It is composed of all tax revenue and profit income from departmental enterprises. It is available for expenditure on government goods and services (partly produced in the public sector and partly bought from the private sector or abroad) and for saving and for provision of depreciation.

The three disposable gross incomes plus the receipts for exports of goods and services (row 34) and the balance of transfers of capital payments (row 35) are together equal to the expendable incomings shown in row 2. The three expenditure sectors, *i.e.* the personal, corporate and governmental, make a large number of transfer payments to one another. It is the purpose of Table VI to reveal the nature and magnitude of these inter-sector transfer payments.

The personal, corporate and public disposable gross incomes from Table VI are entered in Cols. 3, 8 and 12 respectively of Table VII which shows what use is made of them. This use is in the nature of outgoings. Table VII shows these outgoings at the penultimate or savings stage and Table VIII at the ultimate investible funds and aggregate demand stage.

Cols. 4, 5, 6 and 7 of Table VII decompose personal disposable incomes into personal consumption, depreciation of sole proprietorships and partnerships, personal savings and tax reserve of persons. Personal savings alone calls for comment. If the estimates can be trusted, a radical reduction since 1946 is evident in Col. 6. As Table VIII discloses in Col. 4 the combined total of personal, corporate and government savings is a multiple of personal savings since 1948. On an average personal savings are only one-third of total savings. The

TABLE VII

OUTGOINGS AT SAVINGS STAGE

Year	Outgoings	Personal Disposable Income and Depreciation	Personal Consumption	Depreciation of Sole Proprietorships and Partnerships	Personal Savings	Tax Reserves of Persons	Corporate disposable Incomes and Depreciation	Corporate Depreciation	Corporate Savings	Corporate Tax Reserves	Public Auths. Disposable Income and Depreciation	Public Auths. Depreciation	Public Auths. Savings (Net of Stock Appreciation)	Govt. Goods Expenditure	Capital Incomings–Outgoings	Exports
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1938	6,649	4,746	4,335	177	222	12	356	190	161	5	739	90	—82	731	70	738
1946	11,981	7,908	6,886	253	842	—73	744	370	406	—32	1,556	87	—962	2,431	344	1,429
1947	13,151	8,297	7,622	280	394	1	970	410	355	205	1,722	95	—450	2,077	545	1,617
1948	14,338	8,819	8,204	305	317	— 7	985	445	389	161	2,320	95	395	1,830	30	2,184
1949	15,318	9,331	8,567	378	358	28	974	552	465	—43	2,628	97	492	2,039	—30	2,415
1950	16,314	9,814	9,041	415	332	26	11,020	607	321	92	2,738	102	611	2,025	—229	2,971

trend of corporate savings (Col. 10 of Table VII) is not quite clear. They may fall below personal savings in future in consequence of the higher rates of profits tax. Only public authority savings (net of stock appreciation) (Col. 14) have shown a consistent tendency to rise since 1946. From a dissaving of £962 mill. to a positive saving of £611 mill. in 1950 is a total rise £1,573 mill.

The negative entries in the personal and corporate tax reserve columns (Cols. 7 and 11) are explained by large expectations of transfers from the public sector to the personal and corporate sector.

Col. 15 shows that government expenditure on goods and services declined down to 1948 when demobilisation was complete and has risen since. This rise will continue because of the increasing defence expenditure.

Col. 16 gives the balance of capital transfers. If information had been available these entries should have been distributed to the three expenditure sectors, personal, corporate and governmental.

It should be pointed out that corporate and public authority savings differ from the corresponding entries in W.P. 1951. The corporate savings given in Col. 8 of our table differ from the corresponding item 13*b* of Table 34, W.P. 1951 because public transfers to corporate capital accounts were added and the direct taxes on capital were deducted. Public authority savings differ from those shown as item 33 of Table 36, W.P. 1951 by the deduction of stock appreciation.

Table VIII shows outgoings at the investible fund and aggregate demand stage. The sum of the personal, corporate and public authority savings from Table VII are shown as Col. 4 in Table VIII. Similarly the sum of personal and corporate tax reserves from Table VII are shown as Col. 5 in Table VIII. Finally the sum of personal, corporate and governmental depreciation from Table VII are shown as Col. 6 in Table VIII. Col. 16 of Table VII, giving capital incomings and outgoings is repeated as Col. 7 of Table VIII. The entries for any one year in Cols. 4 to 7 are equal to gross investment expenditure shown in Col. 8. This gross investment

TABLE VIII

OUTGOINGS AT INVESTIBLE FUNDS AND AGGREGATE DEMAND STAGE

Year	Outgoings or Aggregate Demand	Consumption	Personal, Corporate and Government Savings	Personal and Corporate Tax Reserves	Personal Corporate and Govt. Depreciation	Capital incomings -outgoings	Gross Investment Expenditure	Govt. Goods Expenditure	Civilian Goods	Defence Goods (Incl. Civil Defence)	Exports
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1938	6,649	4,335	301	17	457	70	845	731	477	254	738
1946	11,981	6,886	286	—105	710	344	1,235	2,431	778	1,653	1,429
1947	13,151	7,622	299	206	785	545	1,835	2,077	1,223	854	1,617
1948	14,338	8,204	1,091	154	845	30	2,120	1,830	1,137	693	2,184
1949	15,318	8,567	1,315	—15	1,027	—30	2,297	2,039	1,140	899	2,415
1950	16,314	9,041	1,264	118	1,124	—229	2,277	2,025	1,215	810	2,971

expenditure which is one of the most vital items in the national expenditure has been growing in money terms until 1949 but has shown a decline since. These fluctuations are reflected in those in tax reserves and in the balance of transfers of capital payments (Cols. 5 and 7).

Government expenditure was still high in 1946 on account of the war ; it decreased until 1948, and has been rising since, largely because of rising prices, and only slightly because of a rise in volume of the goods acquired. Government expenditure is decomposed into expenditure on civilian and defence goods in Cols. 10 and 11. The entries in Col. 11 are the Exchequer issues for defence purposes given in successive Financial Statements presented to Parliament. It is clearly seen that 1948 marked the low ebb of defence expenditure. In spite of higher prices and much more expensive type of equipment, expenditure was only 172% higher than in 1938.

The sum of the entries in columns 3, 8, 9 and 12 for any one year is equivalent to aggregate demand, which in turn is equivalent to the cost of outturn, expendable incomings or outgoings for the same year.

III

The last step in our analysis of the aggregate supply and demand of the last pre-war and the five post-war years consists in establishing comparability between the different years by eliminating price changes. It is the indispensable and vital step wherever figures for more than one year are given. Most tables of W.P. 1951 give estimates for the six years mentioned but their value is much reduced because of the lack of any price indices. It is to be hoped that future White Papers will contain all major sectional price indices mentioned below, and not only the price index of consumption goods as at present. We should be quite happy to have them, even if their retrospective revision from year to year were to approach that of other direct estimates !

To C. F. Carter, W. B. Reddaway and R. Stone goes the credit for having made the first post-war attempt to calculate the net and real gross product of the U.K. (see *Journal of the*

Royal Statistical Society, Part IV, 1950, and Reprint 31, University of Cambridge, Department of Applied Economics). Much ingenuity and logical rigour distinguishes their work. They have compared the real output estimates with the expenditure aggregates, and have calculated implied price indices and national expenditures at 1948 prices. We shall tabulate below their important results, together with our own.

We shall attempt the opposite method. We shall try to calculate Paasche Price levels for consumption, gross investment, government, export and imports, and net indirect tax costs for the six years (1938, 1946-1950) ; and shall derive four further price indices from them : those for aggregate supply and demand, import surplus, net and gross factor incomes.

The methods of calculating the price indices for consumption goods (P_c), for gross investment goods (P_v), for government goods (P_g), for export and import goods (P_X, P_M) and for indirect taxes minus subsidies (P_T) are contained in the appendix.

The calculated price indices are entered in Table IX in the respective columns in the second row (*b*) for each year and are not bracketed. From them were derived the bracketed price indices by methods presently to be described.

The implied price level for aggregate supply (P_Z) and demand (P_D) is immediately obtained from the equation :

$$\frac{D}{P_D} = \frac{Z}{P_Z} = \frac{C}{P_C} + \frac{V}{P_V} + \frac{G}{P_G} + \frac{X}{P_X}$$

where C = consumption expenditure ; V = gross investment expenditure ; G = government expenditure on goods and services ; X = value of exports ; and P_C, P_V, P_G, P_X = sectional price levels, distinguished by suffixes. The right-hand member of this equation is derived from the entries in the third row (*c*) for each year given in Cols. 3 to 6 of Table VIII. This equiflated aggregate demand or supply is entered into Col. 2 in the third row (*c*) for each year. The price level of aggregate demand (P_D) is ascertained by simple division. It is the average price level for all four types of finished goods. 1948 was chosen as base. Over the five post-war years, it grew from ·882 in 1946 to 1·073 in 1950, a relative rise of 22%.

The equiflated aggregate demands for the six years were then expressed as quantity indices with 1948 as base, entered into the fourth row (*d*) for each year. The real aggregate demand of 1938 appears as £12,410 mill. at 1948 prices, compared with £14,338 mill. in 1948 and £15,386 in 1950. The volume index of aggregate supply rose from ·866 in 1938 to ·948 in 1946 and 1·073 in 1950. The post-war growth was about 2·5% p.a.

From the balance of payments equation follows at once the implied price level of the import surplus or $P_{(M-X)}$

$$\frac{M}{P_M} - \frac{X}{P_X} = \frac{[(P_i - P_o) + (K_i - K_o)]}{P_{(M-X)}} = \frac{(M-X)}{P_{(M-X)}}$$

where M = imports ; X = exports ; P_M, P_X and $P_{(M-X)}$ are sectional price levels ; $(P_i - P_o)$ = inward minus outward property income ; $(K_i - K_o)$ = inward minus outward capital payments.

Col. 8 of Table IX contains in the first row (*a*) for each year the import surplus at current prices and in the third row (*c*) the equiflated import surplus. Dividing the first by the second the price level of the import surplus is obtained. It is subject to a violent increase up to 1949 and to a violent decrease from 1949 to 1950. It should be noted that the above method of calculation allows the price level of the import surplus to be influenced by both the import and export price levels, which follows logically from the balance of payments equation.

The cost of outturn equation permits the calculation of price indices both for factor incomes and gross factor incomes $(Y + D)$. We can write at once :

$$\frac{D}{P_D} = \frac{Z}{P_Z} = \frac{Y}{P_Y} + \frac{T}{P_T} + \frac{D_K}{P_V} + \frac{M}{P_M}$$

where the numerators are social aggregates (including T = indirect taxes minus subsidies and D_K = depreciation of capital) and the denominators are sectional price levels. We can also write

$$\frac{D}{P_D} = \frac{Z}{P_Z} = \frac{Y+T}{P_{(Y+T)}} + \frac{D_K}{P_V} + \frac{M}{P_M}$$

TABLE IX

AGGREGATE SUPPLY AND DEMAND AND INCOME IN REAL TERMS

Symbols in Col. 1 : (*a*) = Values at Current Prices ; (*b*) = Price level relative to base 1948 ;
(*c*) = Revalued at 1948 Prices ; (*d*) = Real Index relative to base 1948.

Year		Aggregate Demand or Supply $D = Z$	Consumption C	Domestic Gross Investment V	Govt. Expend. on Goods and Services G	Exports X	Imports M	Import Surplus $(P_i - P_o) + (K_i - K_o)$	Factor Incomes (Excl. of Stock Apprec. Y	Depreciation D	Net Indirect Tax Cost T	Factor Incomes (Excl. of Stock Apprec. Plus Deprec. $Y + D$
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1938	(*a*)	6,649	4,335	845	731	738	971	233	4,633	457	588	5,090
	(*b*)	(.536)	.568	.505	.567	.405	.346	(.235)	(.632)	.505	.429	.618
	(*c*)	12,410	7,630	1,670	1,290	1,820	2,810	990	(7,330)	900	1,370	8,230
	(*d*)	.866	.930	.788	.705	.833	1.271		.747	1.065	.931	.773
1946	(*a*)	11,981	6,886	1,235	2,431	1,429	1,824	395	8,260	710	1,187	8,970
	(*b*)	(.882)	.867	.879	1.001	.793	.730	(.564)	(.934)	.879	.832	.929
	(*c*)	13,580	7,950	1,400	2,430	1,800	2,500	700	(8,840)	810	1,430	9,650
	(*d*)	.948	.969	.660	1.328	.824	1.131		.901	.946	.971	.906
1947	(*a*)	13,151	7,622	1,835	2,077	1,617	2,160	543	8.878	785	1,328	9,663
	(*b*)	(.941)	.931	.945	1.009	.903	.893	(.862)	(.958)	.945	.904	.958
	(*c*)	13,980	8,190	1,940	2,060	1,790	2,420	630	(9,260)	830	1,470	10,090
	(*d*)	.976	.998	.915	1.126	.820	1.095		.944	.982	.999	.947
1948	(*a*)	14,338	8,204	2,120	1,830	2,184	2,213	29	9,808	845	1,472	10,653
	(*b*)	(1.000)	1.000	1.000	1.000	1.000	1.000	(1.000)	(1.000)	1.000	1.000	1.000
	(*c*)	14.338	8,204	2,120	1,830	2,184	2,210	29	9,808	845	1,472	10,653
	(*d*)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1949	(*a*)	15,318	8,567	2,297	2,039	2,415	2,412	— 3	10,399	1,027	1,480	11,426
	(*b*)	(1.029)	1.025	1.039	1.051	1.016	1.017	(1.017)	(1.038)	1.039	.987	1.038
	(*c*)	14,890	8,360	2,210	1,940	2,380	2,370	— 10	10,020	990	1,500	11,010
	(*d*)	1.039	1.019	1.042	1.060	1.085	1.072		1.022	1.172	1.019	1.033
1950	(*a*)	16,314	9,041	2,277	2,025	2,971	2,816	—155	10,772	1,124	1,602	11,896
	(*b*)	(1 060)	1.050	1.063	1.072	1.082	1.190	(.408)	(1.034)	1.063	1.037	1.037
	(*c*)	15,386	8,610	2,140	1,890	2,750	2,370	—380	10,416	1,060	1,540	11,476
	(*d*)	1.073	1.049	1.009	1.033	1.257	1.071		1.039	1.254	1.041	1.077

where $(Y + T)$ is the sum of factor incomes plus indirect taxes net of subsidies and $P_{(Y + T)}$ the sectional price level of $(Y+T)$.

The quaesita are P_Y and $P_{(Y + T)}$ and are calculated from the two equations :

$$\frac{Y}{P_Y} = \frac{Z}{P_Z} - \frac{T}{P_T} - \frac{D_K}{P_V} - \frac{M}{P_M}$$

and

$$\frac{Y + T}{P_{(Y + T)}} = \frac{Z}{P_Z} - \frac{D_K}{P_V} - \frac{M}{P_M}$$

The terms on the right-hand sides of the last two equations are all estimated independently.

The left-hand members of the last two equations are entered in the third row (*c*) for each year of Cols. 9 and 12 respectively. Dividing the net and gross incomes at current rates of remuneration, given in the first row (*a*) for each year in Cols. 9 and 12 by these equiflated values the implied price levels are obtained and entered in the second row (*b*) for each year.

Colin Clark carried out calculations of 1946 to 1950 national income and expenditure aggregates at 1938 prices in his Review of Economic Progress (July-August, 1951, p. 6). His table readily permits the calculation of an index of real aggregate supply (Z) or demand (D) and of the implied price level ($P_Z = P_D$) based on 1938 which are readily comparable with our own estimates.

Table X overleaf compares the Cambridge and Colin Clark real indices and implies price levels with our own.

TABLE X

COMPARISONS OF DIFFERENT REAL INCOME INDICES AND PRICE INDICES

	1938	1946	1947	1948	1949	1950
*Cambridge $(Y + D_K)$		90	94	100	105	109
*Cambridge $(Y + D_K + P_1 - P_0)$ ...		95	95	100	105	108
Our Y	74·7	90·1	94·4	100	102·2	103·9
Our $(Y + D_K)$	77·3	90·6	94·7	100	103·3	107·7
***Cambridge P_Y		90·1	97·3	100	101·5	
Our P_Y	63·2	93·4	95·8	100	103·8	103·4
*Cambridge $P(_{Y + D_K})$		90	95	100	102	103
Our $P(_{Y + D_K})$	61·8	92·9	95·8	100	103·8	103·7
**Cambridge $P(_{V + G})$		89	98	100	104	
Our $P(_{V + G})$	53·2	95·7	97·8	100	104·5	106·7
Colin Clark's $Z = D$	94·6	95·4	98·4	100	104·2	106·5
Our $Z = D$	86·6	94·8	97·6	100	103·9	107·3
Colin Clark's $P_Z = P_D$	49·4	85·3	92·1	100	102·7	107·6
Our $P_Z = P_D$	53·6	88·2	94·1	100	102·9	106·0

* From London and Cambridge Econ. Serv., Aug. 1951, p. 76.

** From ditto, Aug. 1950, p. 82.

*** Inferred from Table 3 of W. B. Reddaway's article, "Movements in the Real Product of the U.K., 1946–1949"; *J.R.S.S.*, Pt. IV, 1950, p. 454.

where: Y = factor incomes; D_K = depreciation of capital; P_Y is the price index of output at factor cost; $P_{(Y + D_K)}$ that of gross income $(Y + D_K)$; $P_{(V + G)}$ is the price index of domestic gross investment (V) and government goods (G); $P_Z = P_D$ is the price index of aggregate supply (Z) or aggregate demand (D).

The divergencies between the Cambridge and our own estimates are not contrary to expectations. They are largely accountable. We used the estimates contained in W.P. 1951 while the Cambridge statisticians used for some calculations data from W.P. 1950. Their basic magnitudes are real

phenomena, *i.e.* real output, while we rely chiefly on expenditure data. At a time of rising trends, this would lead to considerable divergencies, because some income payments (especially dividends) lag considerably behind output, and some expenditures lag appreciably behind income payments. Moreover, their exports and imports are equivalent to physical departures and arrivals of goods and services as given in the Trade and Navigation Accounts while ours reflect change of ownership between residents and non-residents as given in the balance of payments. The differences would show variations from year to year. Their net and gross factor incomes include the balance of foreign property income, while our income data exclude them. Their prices are exclusively implied, while our own are mostly derived directly and are mostly of the Paasche type with changing weights.

Colin Clark's indices differ from our own chiefly because he used different weights; because his export and import figures (net of re-exports) differ considerably from those found in the White Papers; and because he estimated depreciation of capital independently of the White Paper by a formula of his own.

Tables IV to IX show clearly the sharp and fundamental division between pre- and post-war fluctuations of social aggregates. The pre-war fluctuations were definitely cyclical, while the post-war fluctuations were not. As Table IX shows money and real aggregate demand has been steadily increasing since 1946—money demand at a rate of about 7·2% p.a. and real demand by about 2·6% p.a. Money and real consumption, gross investment and exports have been increasing. Money and real Government expenditure decreased from 1946 to 1948, not for cyclical reasons but because of demobilisation. If donated imports are omitted, real imports decreased from 1946 to 1948, again not for cyclical reasons, but because of demobilisation, the world-wide change in the terms of trade between raw materials and manufactures and because of deliberate policy. As long as world re-armament continues no downswing will occur. It is too early yet to say whether endogenous downswings have disappeared for good.

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APPENDIX

The Price Levels of Consumption Goods

They are derived from T.15, 16 and 18, of W.P. 1951. These tables contain total values of consumption at current prices and at 1948 prices for the six years. Dividing the first by the second estimates the implied price levels of consumption goods were obtained. They are shown in Col. 3 of Table X in the second row (*b*) for each year.

The Price Index for Fixed Capital Goods

It was calculated as follows. Table 30 of W.P. 1951, subdivides the total capital expenditure on fixed assets into expenditure on buildings and works and on vehicles, ships, aircraft, plant and machinery. It seemed best to calculate separately a price index for building and another for engineering products. From the official publication on the Cost of House Building, Second Report, 1950, the current cost of a 1947 standard house was obtained for the years 1938, 1947 and 1949. By means of straight line interpolation the decomposition of the cost for 1946, 1948 and 1950 was ascertained.

The Board of Trade index of building materials was used to deflate the materials cost and the Ministry of Labour wage rates were used to deflate the labour cost. The cost of a 1947 standard house at constant 1948 prices was thus obtained. Dividing the current cost of a 1947 standard house by the deflated cost a price index for building was obtained.

The procedure for calculating a price index for engineering products was similar. The ratio of materials cost to labour cost was obtained from the various types of engineering industries for which interim results of the Census of Production for 1948 were available. It was assumed that these real cost ratios remained constant from 1938-1950. The price index of steel was used for deflating raw materials cost in place of a composite price index of all materials as the ratio of different raw materials used in engineering industries was not readily ascertainable. Wage rates of engineering labour of the Ministry of Labour were applied to the labour cost.

The deflated cost of engineering products and cost of building and works for each of the six years, 1938, and 1946-1950, were added up and a quantity index with 1948 as base was obtained. A value index with 1948 as base was derived from Table 30 of W.P. 1951. Dividing this value index by the quantity index mentioned above, a price index for fixed capital goods was obtained. It is contained in Col. 4 of Table X in the second row (*b*) for each year.

It was assumed that the price index of replacement goods is identical with that of gross investment goods. Col. 10 of Table X contains therefore the same price indices as Col. 4.

THE PRICE INDEX OF GOVERNMENT SERVICES

It was calculated as follows :

The total governmental expenditure on goods and services was subdivided into expenditure on defence services, administrative expenditure and purchases from the private sector.

The expenditure on defence services was further subdivided into the pay of the forces, military purchases at home and military imports. Price indices were calculated for each of the three types of defence expenditure and their deflated costs in the six years, 1938 and 1946-50, were thereupon calculated.

Administrative expenditure was subdivided into wages and salaries and depreciation. Special price indices were calculated for both and the total deflated administrative expenditure for the six years was calculated.

Finally, a price index for the purchases from the private sector was estimated and the deflated purchases for the six years were ascertained.

The sums of the deflated expenditures on defence services, administrative services and purchases from the private sector are equivalent to the deflated government expenditure as a whole. An overall quantity index with 1948 as base was then worked out. A value index of government expenditure with 1948 as base had previously been obtained. Dividing the quantity index into the value index the overall price index resulted. It is shown in Col. 5 of Table X in the second row for each year. It is evident that the chief reasons for the fluctuations in the price index of government goods and services lies in the cost of the defence services.

THE (PAASCHE) PRICE INDICES FOR IMPORTS AND EXPORTS

They were taken from the "Average value index numbers of imports and exports" published by the Board of Trade (see : *Ann. Abstr. of Stats.*, 1938-1949, T. 327 and *Board of Trade Journal*). Like all Paasche price indices they give only a rough idea of the year to year price movements.

PRICE INDICES OF INDIRECT TAXES MINUS SUBSIDIES

T. 16 and T. 18 of W.P. 1951 give the following personal consumption expenditure revalued at 1948 prices :

1938 : 7,631 ; 1946 : 7,946 ; 1947 : 8,187 ; 1948 : 8204 ;
1949 : 8,360 ; 1950 : 8,610.

Reworked as a quantity index (base 1948) we have

1938 : ·9302 ; 1946 : ·9686 ; 1947 : ·9979 ; 1948 : 1·0000 ;
1949 : 1·0190 ; 1950 : 1·0495.

Over these six years the net indirect taxes on consumption were 91·38% of total net indirect taxes on all four final types of goods ($C + G + X + V$). It is therefore permissible to assume that all net

indirect taxes are on consumption. The total net indirect taxes were (in £ mill.) :

1938 : 588 ; 1946 : 1,287 ; 1947 : 1,328 ; 1948 : 1,472 ;
1949 : 1,480 ; 1950 : 1,602.

Reworked as a value index (base 1948) this gives :

1938 : ·3995 ; 1946 : ·8064 ; 1947 : ·9022 ; 1948 : 1·0000 ;
1949 : 1·0054 ; 1950 : 1·0883.

Dividing this value index by the above quantity index, we get the following price index of net indirect tax cost :

1938 : ·4295 ; 1946 : ·8325 ; 1947 : ·9041 ; 1948 : 1·0000 ;
1949 : ·9866 ; 1950 : 1·0370.

It is entered in Col. 11 of Table X in the second row (*b*) for each year.

Voting Behaviour in Droylsden in October, 1951

I. Aims and Methods.

This is the report of a survey conducted by the Department of Government, Manchester University, in the Droylsden parliamentary constituency immediately after the general election of October, 1951.[1] The purposes of the survey were to test some of the conclusions about the voting behaviour of social groups that were reached in the report of a similar survey made in the Stretford constitutency in 1950,[2] and to enquire further into the sources of the Conservative working-class vote.

The chief conclusions of the Stretford report concerned the support drawn by the two main parties from the two sexes, from the two major age-groups—the under-fifties and the over-fifties, and from the three largest social classes—the middle-class, the lower middle-class, and the industrial working-class. Table I summarises the information obtained. In this and the next two tables the figures given on each line are percentages of the groups named in the left-hand column.

TABLE I

STRETFORD 1950 : ANALYSIS OF THE SUPPORT RECEIVED BY THE LABOUR AND CONSERVATIVE PARTIES

Party	Sex		Age		Class			
	M	F	Under 50	Over 50	Middle	Lower Middle	Working	Not Known
Labour	54	46	69	31	24	7	64	5
Conservative ...	41	59	59	41	55	13	27	5

[1]The election results in Droylsden were : Labour—26,829, Conservative—24,959 ; the registered electorate was 59,772.

[2]A. H. Birch and Peter Campbell, "Voting Behaviour in a Lancashire Constituency," *The British Journal of Sociology*, Vol. I, No. 3.

From these figures it appears that in Stretford in 1950 the Labour Party drew more of its support from men, from younger electors, and from the industrial working-class than did the Conservative Party. On the other hand, the Conservatives drew more of their support from women, from older electors, and from the middle and lower middle classes than Labour did. These differences were all "statistically significant"; that is to say, they could have been produced by chance errors in the process of sampling in fewer than about 20 occasions in 1,000 with a random sample of this size (474). The difference between the sexes might have occurred by chance only about 4 times in 1,000, and that between the age-groups only about 17 times. The possibility of the difference between the classes occurring by chance is negligible.

The Droylsden constituency, which was chosen for this second survey, consists of the urban districts of Denton, Audenshaw, Droylsden, and Failsworth. These are small industrial towns immediately to the east of Manchester, chiefly engaged in the textile, metal, and coal-mining industries, which have for many years employed between a third and a half of the working population. The whole constituency is within seven miles of Manchester Town Hall, it forms part of the continuous "built-up" area of which Manchester is the centre, and many of the population go to work outside the constituency. Nevertheless, these small towns have many of the characteristics of the more self-contained cotton towns further North, such as Oldham and Rochdale. In particular, the constituency is predominantly working-class (the proportion of working-class votes in our sample was 60%, as against 44% in Stretford); and like other stable working-class areas in Lancashire it has a heavy poll (87·7% in 1950, 86·6% in 1951).[1] In 1950 Labour polled 48·7% of the votes cast, the Conservatives 40·7%, and the Liberals 10·6%. These facts indicated that there was in the constituency a large Conservative working-class vote, and suggested the possibility of analysing its composition.

[1]Peter Campbell and A. H. Birch, "Politics in the North-West," *The Manchester School*, Vol. XVIII, No. 3.

The survey was conducted in the same way as the Stretford survey of 1950. A random sample of the electorate was chosen from the Droylsden register, and staff and students from the Department interviewed the electors. If the original elector refused to co-operate, or was not available at a second visit, a substitute of the same sex and from the same street was questioned. The electors were asked factual questions about their behaviour and circumstances; they were not questioned about their opinions or asked to make judgments about themselves. The interviewers noted the sex and estimated the age of the person interviewed. On the basis of answers to questions about the occupations of the elector and spouse, electors were assigned to the social classes distinguished in the report of the Stretford survey:

I. Upper middle-class: prosperous professional or business.

IIa. Professional and business not in I: school teachers, bank clerks, better paid office workers, etc.

IIb. Technicians: works' managers, industrial chemists, etc.

IIc. Employers not in I: shop owners and publicans.

IIIa. Other non-industrial workers: clerks, shop assistants, etc.

IIIb. Other industrial workers, skilled and semi-skilled: fitters, mechanics, machine minders, transport workers, etc.

IV. Unskilled labourers: porters, packers, sweepers, etc.

So few electors in the sample were assigned to each of the first four classes (I, IIa, IIb, and IIc), that they have been put in one general category called the "middle class." Group IIIa forms the "lower middle class." Groups IIIb and IV constitute the "working class." Because of insufficient information, a few housewives were not assigned to any social class. There were 545 electors in the sample, of whom 44.4% were men. In the constituency, 46·2% of the adult inhabitants are men. In the sample, 50·8% of the voters supported the Labour Party in 1951. For the constituency, the figure is 51·8%. The discrepancies are so small that we can assume this is a random sample.

II. Results.

Comparison with Stretford and general analysis.

In the Droylsden survey electors were asked whether they had voted in 1950, and if so, for which party. It is, therefore, possible to compare the social composition of the two major parties in Droylsden in 1950 with their composition in Stretford in the same year. Errors are introduced into the Droylsden figures by the lapse of time between the election of 1950 and the survey. Some voters died or moved away in the interval, and it was not possible to adjust the age-groups to take the nineteen-month period into account. Table II gives the relevant data for Droylsden. From both Tables I and II the Liberals have been excluded: a Liberal candidate polled 11·8% of the votes in Stretford in 1950, a little more than the proportion polled by the Liberal candidate in Droylsden in that year. In Stretford the Liberal candidate seemed to draw his support from the same groups as the Conservative candidate, except that a higher proportion of his electors were under fifty years of age; in the Droylsden sample there were too few Liberals for useful analysis to be possible.

TABLE II

DROYLSDEN 1950: ANALYSIS OF THE SUPPORT RECEIVED BY THE LABOUR AND CONSERVATIVE PARTIES

Party	Sex		Age		Class			
	M	F	Under 50	Over 50	Middle	Lower Middle	Working	Not Known
Labour	49	51	64	36	10	13	74	3
Conservative ...	42	58	52	48	26	22	46	6

The proportion of working-class electors is much higher in Droylsden than in Stretford, and this has obvious effects on the figures; for instance, in Stretford 55% of the Conservative vote came from the middle-class, but in Droylsden only 24%. Subject to this point, the pattern is similar, but much less marked. The distribution of each party's support between

social classes is similar in both constituencies, and in both the figures are statistically significant. On the other hand, the excess of men among Labour voters and of women among Conservative voters in our Droylsden sample might have occurred by chance in about 240 samples out of 1,000 ; the distribution of voters by age in about 30 samples in 1,000. This suggests perhaps that these factors are of less importance in a more uniform working-class constituency.

Similar conclusions may be drawn from the Droylsden voting in 1951, as is shown in Table III.

TABLE III

DROYLSDEN 1951 : ANALYSIS OF THE SUPPORT RECEIVED BY THE LABOUR AND CONSERVATIVE PARTIES

Party	Sex		Age		Class			
	M	F	Under 50	Over 50	Middle	Lower Middle	Working	Not Known
Labour	47	53	66	34	10	13	74	3
Conservative ...	44	56	58	42	24	23	48	5

Once again, only the differences between social classes are of assured statistical significance.

The difference between these figures and those for 1950 is partly due to four small groups. Out of 30 who were Liberal in 1950, 6 voted Labour, 22 Conservative, and 2 abstained ; out of 10 who were Conservative in 1950, 4 voted Labour and 6 abstained ; out of 37 who were Labour in 1950, 26 voted Conservative and 11 abstained ; out of 45 who did not vote in 1950, 16 voted Labour, 15 Conservative, and 14 did not vote. These groups together included 122 electors, 22% of the sample, and their joint importance in the election might have been considerable. But each group separately is too small to yield figures which are statistically significant, and we cannot therefore draw any general conclusions about the "swing" or about the disposal of the Liberal vote.

Other Social Groups.

Our questionnaire was designed mainly to provide information about the sources of Conservative support within the working-class. From the answers we received, a general picture seemed to emerge. In comparison with Labour, the Conservatives drew more of their working-class support from women, from older people, from Anglicans and Free Churchmen, from active [1] Anglicans rather than those whose membership of the church was merely nominal, from married persons with fewer than two dependent children rather than those with two or more, from those who own or are buying their own homes (even when the effects of age are discounted), from those in work who belong to no trade union, from workers in firms [2] with more than 100 employees, and from those who have been six years or more in the same job under the same employer. Conversely, in comparison with the Conservative Party, Labour received more of its support from men, from younger people, from those professing no religion, from Roman Catholics, from those with two or more dependent children rather than those with less, from those who rent their homes, from trade union members (particularly the more active [3] ones), from workers in firms with fewer than 100 employees, and from those who have spent less than six years in the same job.

Yet these differences are doubtful, for with two exceptions the figures for the groups within the working-class do not fall within the prescribed limits of statistical significance. Table IV shows this for the comparisons between some of the larger of these groups. In the final column of the table we give for each comparison the number of cases in 1,000 in which the differences could have been due to sampling errors alone. It will be seen that the only conclusions which are statistically significant are

[1] An elector was considered an "active" member of his church if he could either name his minister or give an adequate reason for his failure to do so, such as "The living is vacant" or "The Society of Friends has no ministers."

[2] "Firm" was defined as "the working group"—*e.g.* all those in the office, retail store, workshop. Clearly it was not possible to classify all those in the sample—*e.g.* some railway workers.

[3] "Active" members were defined as those who had attended a branch meeting during the past year.

that Roman Catholics are more likely to vote Labour than Anglicans and members of the Free Churches, and that "active" trade unionists are more likely to vote Labour than those in work who do not belong to a union. The former is based on a very small sample of Roman Catholics, and the latter is an obvious truth.

TABLE IV

DROYLSDEN 1951 : DIVISION BETWEEN THE PARTIES OF GROUPS WITHIN THE WORKING CLASS

Group	Number of Voters	Percentage of voters supporting		Chances of random occurrence
		Labour	Conservative	
Religion				
No Religion	82	66	34	160 in
All Churches	233	60	40	1,000
No Religion	82	66	34	67 in
Active Religion ...	147	56	44	1,000
Reformed Churches...	206	57	43	8 in
Roman Catholics ...	27	78	22	1,000
All Anglicans	134	56	44	236 in
Active Anglicans ...	82	51	49	1,000
Family				
0—1 Dependent	203	61	39	62 in
2 + Children	62	74	26	1,000
Home Ownership				
Owners	94	53	47	24 in
Others	215	65	35	1,000
Owners under 50 ...	62	55	45	23 in
Others under 50 ...	135	70	30	1,000
T.U. Membership				
T.U. Members	132	66	34	30 in
Other employees ...	79	53	47	1,000
Active members ...	66	76	24	0·1 in
Other employees ...	79	53	47	1,000
Size of firm				
1—99 workers	75	64	36	160 in
100+ workers	124	57	43	1,000
Time in job				
0—5 Years	98	68	32	23 in
6+ Years	112	55	45	1,000

Statistical methods thus do not in these cases add anything important to the findings of common sense; the only fresh fact which we can put forward with confidence is that none of these social factors is in itself of very great political importance. This is true, at least in Droylsden, of age, sex, religious affiliation or apathy, size of firm, continuity of employment or residence, family status, home ownership. Together these may be important and our figures do something to confirm the presumption that there are links between them. But, when all other factors are held constant, no one of these factors alone affects the distribution of the working-class vote in any striking way.

III. Conclusions.

Our statistical conclusions are therefore limited. Some of the Stretford figures are confirmed for a constituency of a very different type; but the attempt to use the same methods to detect the influence of other social factors has not produced statistically valid conclusions of any importance.

From this, certain practical conclusions follow. The effects of these factors may be real, but they are certainly small. In a balanced political situation it seems possible (as has been pointed out by Dr. Downey,[1] the Roman Catholic Archbishop of Liverpool) for any organised group to exercise influence out of proportion to its numbers. Yet as each of the main parties draws some support from all the working-class groups which we have investigated, and as these groups seem to be divided between the two parties in much the same proportion as the working class as a whole, it may be injudicious for either party to take a line which the voters might regard as favouring one group against others.

The practical conclusion for political scientists seems to be that in the present British situation it is hard to pursue this line of research further with the resources at their disposal. It would, for example, have required a sample of at least 1,250 to establish firm statistical conclusions on the question of active Church membership referred to above. It would have required

[1]Reported in *The Observer*, 25th November, 1951.

a sample of 2,500 to achieve such results for the effects of religious affiliation and of size of firm. An even larger sample would be required to break down the "working-class" into its industrial components, on the basis of sampling in a single constituency ; in Droylsden the largest homogeneous section (those employed in cotton mills) formed less than 10% of the employed working-class. On the other hand, sampling on a national scale, unless it were prohibitively large, would discount local factors which are known to be of importance.

It may be that the investigation of attitudes and motives by random sampling through questionnaires will lead to interesting results. It may be that something can be done on the basis of a "universe" which is in some way pre-selected, so that it consists wholly of trade union members, of church members, or of employees in a single industry : but this presents much greater difficulties than the sampling of a constituency, both as regards access and as regards the avoidance of bias in the sample. If statistical methods fail, we are thrown back on the case-study method, in effect the local history of politics in individual constituencies. Little has yet been done in that direction, except by historians of the sixteenth, seventeenth, and eighteenth centuries.

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Manchester, DAVID DONNISON
November, 1951. ALLEN POTTER

On the Political Economy of Backwardness

I

The capitalist mode of production and the social and political order concomitant with it provided, during the latter part of the eighteenth century, and still more during the entire nineteenth century, a framework for a continuous and, in spite of cyclical disturbances and setbacks, momentous expansion of productivity and material welfare. The relevant facts are well known and call for no elaboration. Yet this material (and cultural) progress was not only spotty in time but most unevenly distributed in space. It was confined to the Western world; and did not affect even all of this territorially and demographically relatively small sector of the inhabited globe. Germany and Austria, Britain and France, some smaller countries in Western Europe, and the United States and Canada occupied places in the neighbourhood of the sun. The vast expanses and the multitude of inhabitants of Eastern Europe, Spain and Portugal, Italy and the Balkans, Latin America and Asia, not to speak of Africa, remained in the deep shadow of backwardness and squalor, of stagnation and misery.

Tardy and skimpy as the benefits of capitalism may have been with respect to the lower classes even in most of the leading industrial countries, they were all but negligible in the less privileged parts of the world. There productivity remained low, and rapid increases in population pushed living standards from bad to worse. The dreams of the prophets of capitalist harmony remained on paper. Capital either did not move from countries where its marginal productivity was low to countries where it could be expected to be high, or if it did, it moved there mainly in order to extract profits from backward countries that frequently accounted for a lion's share of the increments in total output caused by the original investments. Where an increase in the aggregate national product of an underdeveloped country took place, the existing

distribution of income prevented this increment from raising the living standards of the broad masses of the population. Like all general statements, this one is obviously open to criticism based on particular cases. There were, no doubt, colonies and dependencies where the populations profited from inflow of foreign capital. These benefits, however, were few and far between, while exploitation and stagnation were the prevailing rule.

But if Western capitalism failed to improve materially the lot of the peoples inhabiting most backward areas, it accomplished something that profoundly affected the social and political conditions in underdeveloped countries. It introduced there, with amazing rapidity, all the economic and social tensions inherent in the capitalist order. It effectively disrupted whatever was left of the "feudal" coherence of the backward societies. It substituted market contracts for such paternalistic relationships as still survived from century to century. It reoriented the partly or wholly self-sufficient economies of agricultural countries toward the production of marketable commodities. It linked their economic fate with the vagaries of the world market and connected it with the fever curve of international price movements.

A *complete* substitution of capitalist market rationality for the rigidities of feudal or semi-feudal servitude would have represented, in spite of all the pains of transition, an important step in the direction of progress. Yet all that happened was that the age-old exploitation of the population of underdeveloped countries by their domestic overlords, was freed of the mitigating constraints inherited from the feudal tradition. This superimposition of business *mores* over ancient oppression by landed gentries resulted in compounded exploitation, more outrageous corruption, and more glaring injustice.

Nor is this by any means the end of the story. Such export of capital and capitalism as has taken place had not only far-reaching implications of a social nature. It was accompanied by important physical and technical processes. Modern machines and products of advanced industries reached the poverty stricken backyards of the world. To be sure most,

if not all, of these machines worked for their foreign owners—or at least were believed by the population to be working for no one else—and the new refined appurtenances of the good life belonged to foreign businessmen and their domestic counterparts. The bonanza that was capitalism, the fullness of things that was modern industrial civilization, were crowding the display windows—they were protected by barbed wire from the anxious grip of the starving and desperate man in the street.

But they have drastically changed his outlook. Broadening and deepening his economic horizon, they aroused aspirations, envies, and hopes. Young intellectuals filled with zeal and patriotic devotion travelled from the underdeveloped lands to Berlin and London, to Paris and New York, and returned home with the "message of the possible."

Fascinated by the advances and accomplishments observed in the centers of modern industry, they developed, and propagandized the image of what could be attained in their home countries under a more rational economic and social order. The dissatisfaction with the stagnation (or at best, barely perceptible growth) that ripened gradually under the still-calm political and social surface was given an articulate expression. This dissatisfaction was not nurtured by a comparison of reality with a vision of a socialist society. It found sufficient fuel in the confrontation of what was actually happening with what could be accomplished under capitalist institutions of the Western type.

II

The establishment of such institutions was, however, beyond the reach of the tiny middle classes of most backward areas. The inherited backwardness and poverty of their countries never gave them an opportunity to gather the economic strength, the insight, and the self-confidence needed for the assumption of a leading role in society. For centuries under feudal rule they themselves assimilated the political, moral, and cultural values of the dominating class.

While in advanced countries, such as France or Great Britain, the economically ascending middle-classes developed at an early stage a new rational world outlook, which they proudly opposed to the medieval obscurantism of the feudal age, the poor, fledgling bourgeoisie of the underdeveloped countries sought nothing but accommodation to the prevailing order. Living in societies based on privilege, they strove for a share in the existing sinecures. They made political and economic deals with their domestic feudal overlords or with powerful foreign investors, and what industry and commerce developed in backward areas in the course of the last hundred years was rapidly moulded in the straitjacket of monopoly—the plutocratic partner of the aristocratic rulers. What resulted was an economic and political amalgam combining the worst features of both worlds—feudalism and capitalism—and blocking effectively all possibilities of economic growth.

It is quite conceivable that a "conservative" exit from this impasse might have been found in the course of time. A younger generation of enterprising and enlightened businessmen and intellectuals allied with moderate leaders of workers and peasants—a "Young Turk" movement of some sort—might have succeeded in breaking the deadlock, in loosening the hide-bound social and political structure of their countries and in creating the institutional arrangements indispensable for a measure of social and economic progress.

Yet in our rapid age history accorded no time for such a gradual transition. Popular pressures for an amelioration of economic and social conditions, or at least for some perceptible movement in that direction, steadily gained in intensity. To be sure, the growing restiveness of the underprivileged was not directed against the ephemeral principles of a hardly yet existing capitalist order. Its objects were parasitic feudal overlords appropriating large slices of the national product and wasting them on extravagant living ; a government machinery protecting and abetting the dominant interests ; wealthy businessmen reaping immense profits and not utilizing them for productive purposes ; last but not least, foreign colonizers

extracting or believed to be extracting vast gains from their "developmental" operations.

This popular movement had thus essentially bourgeois, democratic, anti-feudal, anti-imperialist tenets. It found outlets in agrarian egalitarianism; it incorporated "muck-raker" elements denouncing monopoly; it strove for national independence and freedom from foreign exploitation.

For the native capitalist middle-classes to assume the leadership of these popular forces and to direct them into the channels of bourgeois democracy—as had happened in Western Europe—they had to identify themselves with the common man. They had to break away from the political, economic, and ideological leadership of the feudal crust and the monopolists allied with it; and they had to demonstrate to the nation as a whole that they had the knowledge, the courage, and the determination to undertake and to carry to victorious conclusion the struggle for economic and social improvement.

In hardly any underdeveloped country were the middle-classes capable of living up to this historical challenge. Some of the reasons for this portentous failure, reasons connected with the internal make-up of the business class itself, were briefly mentioned above. Of equal importance was, however, an "outside" factor. It was the spectacular growth of the international labor movement in Europe that offered the popular forces in backward areas ideological and political leadership that was denied to them by the native bourgeoisie. It pushed the goals and targets of the popular movements far beyond their original limited objectives.

This liaison of labor radicalism and populist revolt painted on the wall the imminent danger of a social revolution. Whether this danger was real or imaginary matters very little. What was essential is that the awareness of this threat effectively determined political and social action. It destroyed whatever chances there were of the capitalist classes joining and leading the popular anti-feudal, anti-monopolist movement. By instilling a mortal fear of expropriation and extinction in the minds of *all* property-owning groups the rise of socialist radicalism, and in particular the Bolshevik Revolution in

Russia, tended to drive all more or less privileged, more or less well-to-do elements in the society into one "counter-revolutionary" coalition. Whatever differences and antagonisms existed between large and small landowners, between monopolistic and competitive business, between liberal bourgeois and reactionary feudal overlords, between domestic and foreign interests, were largely submerged on all important occasions by the over-riding *common* interest in staving off socialism.

The possibility of solving the economic and political deadlock prevailing in the underdeveloped countries on lines of a progressive capitalism all but disappeared. Entering the alliance with all other segments of the ruling class, the capitalist middle-classes yielded one strategic position after another. Afraid that a quarrel with the landed gentry might be exploited by the radical populist movement, the middle-classes abandoned all progressive attitudes in agrarian matters. Afraid that a conflict with the church and the military might weaken the political authority of the government, the middle-classes moved away from all liberal and pacifist currents. Afraid that hostility toward foreign interests might deprive them of foreign support in a case of a revolutionary emergency, the native capitalists deserted their previous anti-imperialist, nationalist platforms.

The peculiar mechanisms of political interaction characteristic of all underdeveloped (and perhaps not only underdeveloped) countries thus operated at full speed. The aboriginal failure of the middle-classes to provide inspiration and leadership to the popular masses pushed those masses into the camp of socialist radicalism. The growth of radicalism pushed the middle-classes into an alliance with the aristocratic and monopolistic reaction. This alliance, cemented by common interest and common fear, pushed the populist forces still further along the road of radicalism and revolt. The outcome was a polarization of society with very little left between the poles. By permitting this polarization to develop, by abandoning the common man and resigning the task of reorganizing society on new, progressive lines, the capitalist

middle-classes threw away their historical chance of assuming effective control over the destinies of their nations, and of directing the gathering popular storm against the fortresses of feudalism and reaction. Its blazing fire turned thus against the entirety of existing economic and social institutions.

III

The economic and political order maintained by the ruling coalition of owning classes finds itself invariably at odds with all the urgent needs of the underdeveloped countries. Neither the social fabric that it embodies nor the institutions that rest upon it are conducive to progressive economic development. The only way to provide for economic growth and to prevent a continuous deterioration of living standards (apart from mass emigration unacceptable to other countries) is to assure a steady increase of total output—at least large enough to offset the rapid growth of population.

An obvious source of such an increase is the utilization of available unutilized or underutilized resources. A large part of this reservoir of dormant productive potentialities is the vast multitude of entirely unemployed or ineffectively employed manpower. There is no way of employing it usefully in agriculture, where the marginal productivity of labor tends to zero. They could be provided with opportunities for productive work only by transfer to industrial pursuits. For this to be feasible large investments in industrial plant and facilities have to be undertaken. Under prevailing conditions such investments are not forthcoming for a number of important and interrelated reasons.

With a very uneven distribution of a very small aggregate income (and wealth), large individual incomes exceeding what could be regarded as "reasonable" requirements for current consumption accrue as a rule to a relatively small group of high-income receivers. Many of them are large landowners maintaining a feudal style of life with large outlays on housing, servants, travel, and other luxuries. Their "requirements for consumption" are so high that there is only little room for

savings. Only relatively insignificant amounts are left to be spent on improvements of agricultural estates.

Other members of the "upper crust" receiving incomes markedly surpassing "reasonable" levels of consumption are wealthy businessmen. For social reasons briefly mentioned above, their consumption too is very much larger than it would have been were they brought up in the puritan tradition of a bourgeois civilization. Their drive to accumulate and to expand their enterprises is continuously counteracted by the urgent desire to imitate in their living habits the socially dominant "old families," to prove by their conspicuous outlays on the amenities of rich life that they are socially (and therefore also politically) not inferior to their aristocratic partners in the ruling coalition.

But if this tendency curtails the volume of savings that could have been amassed by the urban high-income receivers, their will to re-invest their funds in productive enterprises is effectively curbed by a strong reluctance to damage their carefully erected monopolistic market positions through creation of additional productive capacity, and by absence of suitable investment opportunities—paradoxical as this may sound with reference to underdeveloped countries.

The deficiency of investment opportunities stems to a large extent from the structure and the limitations of the existing effective demand. With very low living standards the bulk of the aggregate money income of the population is spent on food and relatively primitive items of clothing and household necessities. These are available at low prices, and investment of large funds in plant and facilities that could produce this type of commodities more cheaply rarely promises attractive returns. Nor does it appear profitable to develop major enterprises the output of which would cater to the requirements of the rich. Large as their individual purchases of various luxuries may be, their aggregate spending on each of them is not sufficient to support the development of an elaborate luxury industry—in particular since the "snob" character of prevailing tastes renders only imported luxury articles true marks of social distinction.

Finally, the limited demand for investment goods precludes the building up of a machinery or equipment industry. Such mass consumption goods as are lacking, and such quantities of luxury goods as are purchased by the well-to-do, as well as the comparatively small quantities of investment goods needed by industry, are thus imported from abroad in exchange for domestic agricultural products and raw materials.

This leaves the expansion of exportable raw materials output as a major outlet for investment activities. There the possibilities are greatly influenced, however, by the technology of the production of most raw materials as well as by the nature of the markets to be served. Many raw materials, in particular oil, metals, certain industrial crops, have to be produced on a large scale if costs are to be kept low and satisfactory returns assured. Large-scale production, however, calls for large investments, so large indeed as to exceed the potentialities of the native capitalists in backward countries. Production of raw materials for a distant market entails, moreover, much larger risks than those encountered in domestic business. The difficulty of foreseeing accurately such things as receptiveness of the world markets, prices obtainable in competition with other countries, volume of output in other parts of the world, etc., sharply reduces the interest of native capitalists in these lines of business. They become to a predominant extent the domain of foreigners who, financially stronger, have at the same time much closer contacts with foreign outlets of their products.

The shortage of investible funds and the lack of investment opportunities represent two aspects of the same problem. A great number of investment projects, unprofitable under prevailing conditions, could be most promising in a general environment of economic expansion.

In backward areas a new industrial venture must frequently, if not always, break virgin ground. It has no functioning economic system to draw upon. It has to organize with its own efforts not only the productive process *within* its own confines, it must provide in addition for all the necessary

outside arrangements essential to its operations. It does not enjoy the benefits of "external economies."

There can be no doubt that the absence of external economies, the inadequacy of the economic milieu in underdeveloped countries, constituted everywhere an important deterrent to investment in industrial projects. There is no way of rapidly bridging the gap. Large-scale investment is predicated upon large-scale investment. Roads, electric power stations, rail-roads, and houses have to be built *before* businessmen find it profitable to erect factories, to invest their funds in new industrial enterprises.

Yet investing in road building, financing construction of canals and power stations, organizing large housing projects, etc., transcend by far the financial and mental horizon of capitalists in underdeveloped countries. Not only are their financial resources too small for such ambitious projects, but their background and habits militate against entering commitments of this type. Brought up in the tradition of merchandizing and manufacturing consumers' goods—as is characteristic of an early phase of capitalist development—businessmen in underdeveloped countries are accustomed to rapid turnover, large but short-term risks, and correspondingly high rates of profit. Sinking funds in enterprises where profitability could manifest itself only in the course of many years is a largely unknown and unattractive departure.

The difference between social and private rationality that exists in any market and profit-determined economy is thus particularly striking in underdeveloped countries. While building of roads, harnessing of water power, or organization of housing developments may facilitate industrial growth and thus contribute to increased productivity on a national scale, the individual firms engaged in such activities may suffer losses and be unable to recover their investments. The nature of the problem involved can be easily exemplified : starting a new industrial enterprise is predicated among other things upon the availability of appropriately skilled manpower. Engaging men and training them on the job is time-consuming and

expensive. They are liable to be unproductive, wasteful, and careless in the treatment of valuable tools and equipment. Accepting the losses involved may be justifiable from the standpoint of the individual firm if such a firm can count with reasonable certainty on retaining the services of those men *after* they go through training and acquire the requisite skills. However, should they leave the firm that provided the training and proceed to work for another enterprise, that new employer would reap the fruits of the first firm's outlays. In a developed industrial society this consideration is relatively unimportant. Losses and gains of individual firms generated by labor turnover may cancel out. In an underdeveloped country the chances of such cancellation are very small, if not nil. Although society as a whole would clearly benefit by the increase of skills of at least some of its members, individual businessmen cannot afford to provide the training that such an increase demands.

But could not the required increase in total output be attained by better utilization of land—another unutilized or inadequately utilized productive factor?

There is usually no land that is both fit for agricultural purposes and at the same time readily accessible. Such terrain as could be cultivated but is actually not being tilled would usually require considerable investment before becoming suitable for settlement. In underdeveloped countries such outlays for agricultural purposes are just as unattractive to private interests as they are for industrial purposes.

On the other hand, more adequate employment of land that is already used in agriculture runs into considerable difficulties. Very few improvements that would be necessary in order to increase productivity can be carried out within the narrow confines of small-peasant holdings. Not only are the peasants in underdeveloped countries utterly unable to pay for such innovations, but the size of their lots offers no justification for their introduction.

Owners of large estates are in a sense in no better position. With limited savings at their disposal they do not have the funds to finance expensive improvements in their enterprises,

nor do such projects appear profitable in view of the high prices of imported equipment in relation to prices of agricultural produce and wages of agricultural labor.

Approached thus *via* agriculture, an expansion of total output would also seem to be attainable only through the development of industry. Only through increase of industrial productivity could agricultural machinery, fertilizers, electric power, etc., be brought within the reach of the agricultural producer. Only through an increased demand for labor could agricultural wages be raised and a stimulus provided for a modernization of the agricultural economy. Only through the growth of industrial production could agricultural labor displaced by the machine be absorbed in productive employment.

Monopolistic market structures, shortage of savings, lack of external economies, the divergence of social and private rationalities do not exhaust, however, the list of obstacles blocking the way of privately organized industrial expansion in underdeveloped countries. Those obstacles have to be considered against the background of the general feeling of uncertainty prevailing in all backward areas. The coalition of the owning classes formed under pressure of fear, and held together by the real or imagined danger of social upheavals, provokes continuously more or less threatening rumblings under the outwardly calm political surface. The social and political tensions to which that coalition is a political response are not liquidated by the prevailing system ; they are only repressed. Normal and quiet as the daily routine frequently appears, the more enlightened and understanding members of the ruling groups in underdeveloped countries sense the inherent instability of the political and social order. Occasional outbursts of popular dissatisfaction assuming the form of peasant uprisings, violent strikes or local guerrilla warfare, serve from time to time as grim reminders of the latent crisis.

In such a climate there is no will to invest on the part of monied people ; in such a climate there is no enthusiasm for long-term projects ; in such a climate the motto of all participants in the privileges offered by society is *carpe diem.*

IV

Could not, however, an appropriate policy on the part of the governments involved change the political climate and facilitate economic growth? In our time, when faith in the manipulative omnipotence of the State has all but displaced analysis of its social structure and understanding of its political and economic functions, the tendency is obviously to answer these questions in the affirmative.

Looking at the matter purely mechanically, it would appear indeed that much could be done, by a well-advised regime in an underdeveloped country, to provide for a relatively rapid increase of total output, accompanied by an improvement of the living standards of the population. There is a number of measures that the government could take in an effort to overcome backwardness. A fiscal policy could be adopted that by means of capital levies, and a highly progressive tax system would syphon off all surplus purchasing power, and in this way eliminate non-essential consumption. The savings thus enforced could be channelled by the government into productive investment. Power stations, railroads, highways, irrigation systems, and soil improvements could be organized by the State with a view to creating an economic environment conducive to the growth of productivity. Technical schools on various levels could be set up by the public authority to furnish industrial training to young people as well as to adult workers and the unemployed. A system of scholarships could be introduced rendering acquisition of skills accessible to low-income strata.

Wherever private capital refrains from undertaking certain industrial projects, or wherever monopolistic controls block the necessary expansion of plant and facilities in particular industries, the government could step in and make the requisite investments. Where developmental possibilities that are rewarding in the long-run appear unprofitable during the initial period of gestation and learning, and are therefore beyond the horizon of private businessmen, the government could undertake to shoulder the short-run losses.

In addition an entire arsenal of "preventive" devices is at the disposal of the authorities. Inflationary pressures

resulting from developmental activities (private and public) could be reduced or even eliminated, if outlays on investment projects could be offset by a corresponding and simultaneous contraction of spending elsewhere in the economic system. What this would call for is a taxation policy that would effectively remove from the income stream amounts sufficient to neutralize the investment-caused expansion of aggregate money income.

In the interim, and as a supplement, speculation in scarce goods and excessive profiteering in essential commodities could be suppressed by rigorous price controls. An equitable distribution of mass consumption goods in short supply could be assured by rationing. Diversion of resources in high demand to luxury purposes could be prevented by allocation and priority schemes. Strict supervision of transactions involving foreign exchanges could render capital flight, expenditure of limited foreign funds on luxury imports, pleasure trips abroad, and the like, impossible.

What the combination of these measures would accomplish is a radical change in the structure of effective demand in the underdeveloped country, and a reallocation of productive resources to satisfy society's need for economic development. By curtailing consumption of the higher-income groups, the amounts of savings available for investment purposes could be markedly increased. The squandering of limited supplies of foreign exchange on capital flight, or on importation of redundant foreign goods and services, could be prevented, and the foreign funds thus saved could be used for the acquisition of foreign-made machinery needed for economic development. The reluctance of private interests to engage in enterprises that are socially necessary, but may not promise rich returns in the short-run, would be prevented from determining the economic life of the backward country.

The mere listing of the steps that would have to be undertaken, in order to assure an expansion of output and income in an underdeveloped country, reveals the utter implausibility of the view that they could be carried out by the governments existing in most underdeveloped countries. The

reason for this inability is only to a negligible extent the non-existence of the competent and honest civil service needed for the administration of the program. A symptom itself of the political and social marasmus prevailing in underdeveloped countries, this lack cannot be remedied without attacking the underlying causes. Nor does it touch anything near the roots of the matter to lament the lack of satisfactory tax policies in backward countries, or to deplore the absence of tax "morale" and "discipline" among the civic virtues of their populations.

The crucial fact rendering the realization of a developmental program illusory is the political and social structure of the governments in power. The alliance of property-owning classes controlling the destinies of most underdeveloped countries, cannot be expected to design and to execute a set of measures running counter to each and all of their immediate vested interests. If to appease the restive public, blueprints of progressive measures such as agrarian reform, equitable tax legislation, etc., are officially announced, their enforcement is wilfully sabotaged. The government, representing a political compromise between landed and business interests cannot suppress the wasteful management of landed estates and the conspicuous consumption on the part of the aristocracy; cannot suppress monopolistic abuses, profiteering, capital flights, and extravagant living on the part of businessmen. It cannot curtail or abandon its lavish appropriations for a military and police establishment, providing attractive careers to the scions of wealthy families and a profitable outlet for armaments produced by their parents—quite apart from the fact that this establishment serves as the main protection against possible popular revolt. Set up to guard and to abet the existing property rights and privileges, it cannot become the architect of a policy calculated to destroy the privileges standing in the way of economic progress and to place the property and the incomes derived from it at the service of society as a whole.

Nor is there much to be said for the "intermediate" position which, granting the essential incompatibility of a well-conceived and vigorously executed developmental program with the political and social institutions prevailing in most

underdeveloped countries, insists that at least *some* of the requisite measures could be carried out by the existing political authorities. This school of thought overlooks entirely the weakness, if not the complete absence, of social and political forces that could induce the necessary concessions on the part of the ruling coalition. By background and political upbringing, too myopic and self-interested to permit the slightest encroachments upon their inherited positions and cherished privileges, the upper-classes in underdeveloped countries resist doggedly all pressures in that direction. Every time such pressures grow in strength they succeed in cementing anew the alliance of all conservative elements, by decrying all attempts at reform as assaults on the very foundations of society.

Even if measures like progressive taxation, capital levies, and foreign exchange controls could be enforced by the corrupt officials operating in the demoralized business communities of underdeveloped countries, such enforcement would to a large extent defeat its original purpose. Where businessmen do not invest, unless in expectation of lavish profits, a taxation system succeeding in confiscating large parts of these profits is bound to kill private investment. Where doing business or operating landed estates are attractive mainly because they permit luxurious living, foreign exchange controls preventing the importation of luxury goods are bound to blight enterprise. Where the only stimulus to hard work on the part of intellectuals, technicians, and civil servants is the chance of partaking in the privileges of the ruling class, a policy aiming at the reduction of inequality of social status and income is bound to smother effort.

The injection of planning into a society living in the twilight between feudalism and capitalism cannot but result in additional corruption, larger and more artful evasions of the law, and more brazen abuses of authority.

V

There would seem to be no exit from the impasse. The ruling coalition of interests does not abdicate of its own volition, nor does it change its character in response to

incantation. Although its individual members occasionally leave the sinking ship physically or financially (or in both ways), the property-owning classes as a whole are as a rule grimly determined to hold fast to their political and economic entrenchments.

If the threat of social upheaval assumes dangerous proportions, they tighten their grip on political life and move rapidly in the direction of unbridled reaction and military dictatorship. Making use of favourable international opportunities, and of ideological and social affinities to ruling groups in other countries, they solicit foreign economic and sometimes military aid, in their efforts to stave off the impending disaster.

Such aid is likely to be given to them by foreign governments regarding them as an evil less to be feared than the social revolution that would sweep them out of power. This attitude of their friends and protectors abroad is no less short-sighted than their own.

The adjustment of the social and political conditions in underdeveloped countries to the urgent needs of economic development can be postponed; it cannot be indefinitely avoided. In the past, it could have been delayed by decades or even centuries. In our age it is a matter of years. Bolstering the political system of power existing in backward countries by providing it with military support may temporarily block the eruption of the volcano; it cannot stop the subterranean gathering of explosive forces.

Economic help in the form of loans and grants given to the governments of backward countries, to enable them to promote a measure of economic progress, is no substitute for the domestic changes that are mandatory if economic development is to be attained.

Such help, in fact, may actually do more harm than good. Possibly permitting the importation of some foreign-made machinery and equipment for government or business sponsored investment projects, but not accompanied by any of the steps that are needed to assure healthy economic growth, foreign assistance thus supplied may set off an inflationary spiral

increasing and aggravating the existing social and economic tensions in underdeveloped countries.

If, as is frequently the case, these loans or grants from abroad are tied to the fulfilment of certain conditions on the part of the receiving country regarding their use, the resulting investment may be directed in such channels as to conform more to the interests of the lending than to those of the borrowing country. Where economic advice as a form of "technical assistance" is supplied to the underdeveloped country, and its acceptance is made a prerequisite to eligibility for financial aid, this advice often pushes the governments of underdeveloped countries toward policies, ideologically or otherwise attractive to the foreign experts dispensing economic counsel, but not necessarily conducive to economic development of the "benefitted" countries. Nationalism and xenophobia are thus strengthened in backward areas—additional fuel for political restiveness.

For backward countries to enter the road of economic growth and social progress, the political framework of their existence has to be drastically revamped. The alliance between fuedal landlords, industrial royalists, and the capitalist middle-classes has to be broken. The keepers of the past cannot be the builders of the future. Such progressive and enterprising elements as exist in backward societies have to obtain the possibility of leading their countries in the direction of economic and social growth.

What France, Britain, and America have accomplished through their own revolutions has to be attained in backward countries by a combined effort of popular forces, enlightened government, and unselfish foreign help. This combined effort must sweep away the holdover institutions of a defunct age, must change the political and social climate in the underdeveloped countries, and must imbue their nations with a new spirit of enterprise and freedom.

Should it prove too late in the historical process for the bourgeoisie to rise to its responsibilities in backward areas, should the long experience of servitude and accommodation to the feudal past have reduced the forces of progressive capitalism

to impotence, the backward countries of the world will inevitably turn to economic planning and social collectivism. If the capitalist world outlook of economic and social progress, propelled by enlightened self-interest, should prove unable to triumph over the conservatism of inherited positions and traditional privileges, if the capitalist promise of advance and reward to the efficient, the industrious, the able, should not displace the feudal assurance of security and power to the well-bred, the well-connected and the conformist—a new social ethos will become the spirit and guide of a new age. It will be the ethos of the collective effort, the creed of the predominance of the interests of society over the interests of selected few.

The transition may be abrupt and painful. The land not given to the peasants legally may be taken by them forcibly. High incomes not confiscated through taxation may be eliminated by outright expropriation. Corrupt officials not retired in orderly fashion may be removed by violent action.

Which way the historical wheel will turn and in which way the crisis in the backward countries will find its final solution will depend in the main on whether the capitalist middle-classes in the backward areas, and the rulers of the advanced industrial nations of the world, overcome their fear and myopia. Or are they too spell-bound by their narrowly conceived selfish interests, too blinded by their hatred of progress, grown so senile in these latter days of the capitalist age, as to commit suicide out of fear of death?

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Remedies for Cyclical Unemployment in the North-East

I

An earlier article [1] dealt with the main causes of localised unemployment and remedies for it. This article deals with measures for attacking localised unemployment caused by cyclical depression in one part of the country—the North-East.[2] The reason for choosing cyclical unemployment for discussion is that it presents harder problems than unemployment due to decaying industries, structural change or other causes of localised unemployment. The reasons for studying one part only of the country, and for selecting the North-East, are that certain areas are liable to suffer more cyclical unemployment than the country as a whole, and that of these the North-East is particularly vulnerable.

II

General measures [3] to compensate for the decline of home demand caused by cyclical depression may be considered first. There is no doubt that these could help to sustain employment in the Area's [4] home-market industries; for they could stimulate demand for their products both in the Area itself and by other parts of the country. Moreover, if—as is likely—the Area's home-market industries were to suffer more unemployment than the national average, there are certain general measures that are capable of being so directed as to give special help to the Area. For example, orders by government, local authorities, and nationalised industries could be arranged to benefit specific industries and firms affected by unemployment more than others. In addition, various devices could be invented to influence private firms to act similarly.

[1] *The Manchester School of Economic and Social Studies*, January, 1951, pp. 71-88.

[2] By North-East is meant the county of Durham, together with those parts of Northumberland (South-East) and North Yorkshire which are now included in the North-Eastern Development Area.

[3] By general measures are meant any action that could be taken by the State to maintain the general level of demand.

[4] The North-East is referred to throughout as the Area.

Nevertheless, such general measures might not be adequate to counteract heavy localised unemployment in the Area's home-market industries. The following table bears on this.

NORTH-EASTERN DEVELOPMENT AREA

INDUSTRIAL DISTRIBUTION OF THE INSURED POPULATION, JULY, 1948

	Number		Percentage	Great Britain's percentage
Constructional Goods				
Building and contracting ...	60,030			
Constructional engineering ...	8,020			
Other	4,070			
		72,120	8·8	7·5
Investment Goods				
Coalmining	150,210			
Other mining and quarrying ...	5,600			
Non-metalliferous mining products	13,220			
Chemicals, coke ovens, etc. ...	29,330			
Shipbuilding, ship-repairing and marine engineering	64,490			
Non-electrical engineering ...	39,090			
Electrical engineering	14,250			
Locomotives, vehicles, etc. ...	18,690			
Metal products	11,100			
Precision instruments, etc. ...	850			
Metal manufacture	45,900			
		392,730	47·6	24·0
Agriculture and Fishing ...	12,390			
		12,390	1·5	4·6
Consumers' Goods				
Light chemicals	2,690			
Light electrical goods	5,440			
Textiles	5,260			
Clothing	18,530			
Leather goods, etc.	1,800			
Food, drink, tobacco	21,830			
Paper and printing	8,150			
Furniture, etc.	5,160			
Other manufacturing	6,110			
		74,970	9·1	17·4
Consumers' Services	263,410			
Unclassified	8,610	272,020	33·0	46·5
	824,230	824,230		

The Area has a much larger percentage of its labour force in investment goods[1] and constructional industries than the country as a whole—56·4 per cent. against 31·5 per cent. These industries have been expanded by the post-war boom, and are being further expanded by re-armament. But cyclical depression would necessitate their contraction to lower levels of output and employment. To avoid the serious localised unemployment caused by the required contraction of investment goods and constructional industries, it would be necessary to cause a growth of output in the rest of the Area's home-market industries—consumers' goods industries. But, as the existing productive capacity of these is small—9·1 per cent. against 17·4 per cent. in the country as a whole—the most strenuous use of general measures could not expand their output by enough to absorb all those thrown out of work by the cyclical contraction of the investment goods and constructional industries.

To turn to the Area's export industries, if previous history is a guide, cyclical downturn would be likely to reduce the demand for their products, and employment, more than in the case of home-market industries. That is the more likely because the Area relies much upon export. At mid-1948, over 24 per cent. of the labour force in manufacturing industry was devoted to production for export. For investment goods industries the figure was about 28 per cent. ; for shipbuilding and ship-repairing alone it was about 24 per cent. ; and for consumers' goods industries under 15 per cent.[2] Accurate figures for recent periods are not available : but it is known that the above percentages are now higher.

[1]Because so much of the Area's coalmining serves the investment goods and constructional industries, it is ranked under that category. Even without coalmining, the proportion of the Area's labour force in investment goods and constructional industries is distinctly higher than for the country generally—38·2 per cent. against 27·6 per cent.

[2]The chief investment goods industries concerned were—shipbuilding and marine engineering ; non-electrical engineering ; electrical machinery ; telegraph and telephone apparatus ; iron and steel forgings ; wire ; brass manufactures ; scientific instruments ; chemicals and dyes ; iron foundry goods. The chief consumers' goods industries were batteries and accumulators ; hollow-ware ; woollen and worsted ; rayon and nylon ; hosiery and other knitted goods ; light metal products.

General measures could indeed help to counteract the effects of cyclical depression in export—not alone by stemming the fall in foreign demand, but also by substituting home, for foreign demand. The fall in foreign demand might be mitigated by export subsidies. But, while helpful in dealing with a short-lived depression, they are not acceptable for coping with a long-drawn-out slump. Foreign lending to enable overseas buyers to demand the Area's goods is another possible device. But, since a through-going depression would provoke an adverse balance of payments, and since our foreign exchange reserves are slender, this too would be limited in scope. An allied expedient is to pay off sterling balances. As, however, the countries holding these would suffer a decline of their exports during general depression, they may be disinclined to maintain their imports from this country at, or near, the boom level. Another devaluation could help export, but it is hardly a normal measure for treating cyclical unemployment. Extension of bilateral agreements to bolster up our exports would only be feasible to a limited extent if the depression spread to other countries. The best remedy of all, of course, would be concerted action by all countries to maintain the volume of international trade. But we are not entitled to assume that this would be certain to happen during the next cyclical depression.

It seems, then, that general measures could more profitably concern themselves with substituting home demand for lost foreign demand. There is, indeed, more scope for this; but it would not be easy. To think in terms of the Area, and to take a single example, one of its important exports is ships. Doubtless it would not be impossible to "stockpile" ships. But subsequent technical changes, and also alterations in foreign demand, might cause the stored ships to become superfluous. Again, since shipbuilding costs would reach their peak during the boom, stockpiling might occur at a cost level greater than later earning capacity or foreign demand prices would justify — and there would be storage costs as well. The most important limitation of stockpiling, however, is that by maintaining the productive capacity of shipbuilding at the over-expanded

boom level, it would prevent necessary reduction in capacity. And the alternative of a "scrap and build" policy would suffer from similar drawbacks. Even if the volume of shipping were reduced by scrapping, to be successful in keeping up shipbuilding employment,[1] the policy would have to perpetuate the excess capacity of the boom.

Although shipbuilding is a special case, it would be little less difficult to substitute foreign demand by home demand in other export industries. In a few instances, the product made for export has no similar uses at home. Re-adaptation would thus be necessary ; and while this was being undertaken there would be unemployment. In other instances, it would be difficult to expand home demand sufficiently to absorb the whole output previously sent abroad—and any resultant stockpiling would be exposed to the drawbacks named above. A clear limitation would be imposed by the consequential loss of foreign exchange reserves—due both to lost exports and continued imports of materials. Last, there is the fundamental objection that, by maintaining the export industries unchanged in scale, structure and types, the re-adaptations enjoined by cyclical depression would be delayed and hindered.

The general measures dealt with so far are therefore limited in efficacy. But others [2] could be used—public works and the migration of unemployed workpeople to other parts of the country. Public works could improve and expand the Area's social capital. That would, indirectly, raise the efficiency of the Area's industry and—to some extent—of its workpeople. Yet the scope of public works is limited. And there are well-known drawbacks to their use on a large scale. Most important of all, public works could do little to maintain activity in the Area's dominant industries, or to promote the many-sided re-adaptations called for by cyclical fluctuation. As for migration of unemployed workpeople to other parts of

[1] In 1948, the Area's shipbuilding labour force was some 23 per cent. larger than in 1939—when it was higher than in the 'thirties. Since 1948, the figure has increased.

[2] The possibility of reducing unemployment by deliberately cutting imports and producing them at home is not considered because it is assumed to be contrary to accepted opinion.

the country (such as the London area, the South-East, the South-West, and the Midlands) this would certainly be useful. For general measures to maintain demand can be more effective in these other parts of the country because they are less committed to industries especially vulnerable to cyclical depression —*i.e.* investment goods industries and export trades. Moreover, these areas are rich in expansionary industries capable of helping escape from depression. The case for migration is strengthened, besides, by the fact that the Area is likely to experience a greater growth of its working population during the next fifteen years than the country generally. Nevertheless, it is hard to induce considerable migration from one area in a short period—such as the period typical of cyclical depression. And the shorter the depression—so that the Area's labour force could be re-employed before long—the weaker the case for migration. Again, large-scale migration would necessitate the construction in the receiving areas of additional social capital; and the least drawback of this is that it would take time. Last, movement out of the Area of workpeople could not directly bring about the modifications in the scale, types and distribution of the Area's industries required to cope with a long-lasting cyclical slump.

The conclusion of the above analysis is more negative than positive. Although undoubtedly general measures could play a part in counteracting cyclical unemployment, even collectively their efficacy would be limited. Nevertheless, it is desirable to make it possible for the Area to secure maximum benefit from them. To that end, the Area's disproportionate commitment to investment goods and export industries should be reduced and the proportion of its consumption goods and home-market industries increased.

To reinforce general measures, and to heighten the innate capacity of the Area to meet localised unemployment, it is desirable, besides, to modify its industrial structure so as to bestow upon it a sufficient volume of industry that is capable—unaided by general measures—of withstanding the depression and also of escaping from it as rapidly as possible. History shows that industry of the former kind—namely, industry

serving essential needs which continue despite cyclical downturn—suffers least of all from depression. It also shows that industry of the latter kind—namely, industry undergoing secular expansion—is able to take advantage of new openings which occur even while lowered economic activity prevails, and thereby to pave the way for escape from it. A greater amount of both kinds of industry should be brought to the Area.

III

To put these findings into effect calls for action of a specific kind. This can be grouped under four heads—(1) the removal of part of the investment goods and export industries to other areas of the country; (2) the limitation of further expansion of these industries in the Area; (3) the addition to the Area of cyclically-less-sensitive and expansionary industries—in which are included consumption goods and home-market industries; (4) action to cause firms that now produce investment goods or are large producers of export products, to make also goods of the kinds named under (3).

Consider the first of these. Certain investment goods and export industries cannot be removed from the Area because they are irrevocably tied to it. Such are coalmining and other mining and quarrying. These, the largest single industry group, account for nearly 30 per cent. of the labour force in manufacturing and extractive industries combined. Another is the extractive part of the chemicals industry—one of the five largest industries. Shipbuilding and ship-repairing could not readily be transferred—except to other shipbuilding areas—because these industries need peculiar natural resources, constructional facilities of special kinds, extensive physical equipment, and a modicum of labour possessing particular aptitudes. Nor could a strong case be made out for shifting these industries to other major shipbuilding areas because these [1] are also substantially committed to it and so have hardly less claims to its dispersal. Shipbuilding, with its close associate marine engineering, accounts for another 16 per cent.

[1] About two-thirds of the national labour force in shipbuilding and ship-repairing are concentrated in four Development Areas—areas vulnerable to cyclical depression.

of the Area's labour force in manufacturing and extractive industry combined; and that figure would be perceptibly greater if reckoning were made of those parts of the Area's metals, engineering, woodwork, paint and other trades producing to supply the needs of shipbuilding. In some manufactures, transfer might involve sizeable additions to costs of production—*e.g.* sections of the chemical industry based on the natural resources of the Area, integrated plants, and heavy engineering that is in locations which give it access to valuable external economies. The cost of dismantling the complex and extensive plants of heavy industry—such as iron and steel, parts of the chemicals industry, marine engineering, and construction of locomotives—transporting them, re-erecting them and building new factories elsewhere, would be high. Besides, around these industries have grown up ancillary trades which, logically, should go with them. Last, at least some social capital equipment, to supply essential services of the special kinds and on the scale that these industries need, and to provide for workpeople who migrate, would have to be duplicated elsewhere.

Transfer is, therefore, a limited means of reducing the disproportion of investment goods industry and that heavily committed to export. But where it is feasible, the State should stimulate it—if necessary, by inducements. The inducement most likely to be effective is to pay the cost of movement. Support for such payment is available where there are other locations not involving significant differences of production costs. That is not unlikely; for few products of the Area's investment goods and export industries are made there solely, and similar external economies exist, or can be developed, in other places. Further possible inducements include State help in acquiring suitable factories, and in providing necessary social capital. Since otherwise private costs of production may be affected adversely, the actual decisions to move should be left to the firms themselves. Therefore, it cannot be foreknown which industries and districts of the Area would be concerned. Possibly, however, firms making metal products such as iron and steel tubes,

boilers, machine tools, wire and brass goods, and firms in textile, agricultural and electrical engineering would be able to move without damaging effects upon their costs of production—especially those firms already established elsewhere. As total numbers of insured population in these industries only account for about 9 per cent. of the labour force in manufacturing industry, even if they were all to transfer the effects would not be substantial. Even so, this remedy should be used.

The second method—to limit the further growth in the Area of investment goods and export industries—could be practised by not replacing firms that close, denying expansions of existing factories, restricting the entry to the Area of new firms, and reducing the labour force in such industries. The initial suggestion needs no comment. The next should be applied with care because certain expansions may reduce private costs. Except where they would create substantial additional capacity, those should be allowed. Refusals of proposals to expand, and the restriction of the entry of new firms, are warrantable where alternative locations elsewhere are available. As for the reduction of the labour force, experience of the Distribution of Industry Act since 1945 shows that the alternative industry going to the Area has drawn away some labour from the old industries and economised their previously prodigal use of labour. Such an outcome is likely to recur as alternative industry increases. In the long run, the total effect of this method—because the varied results would be cumulative—would be quite considerable.

The third method—adding to the Area cyclically-less-sensitive and expansionary industries, including consumption goods and home-market industries—has certain drawbacks. Such diversification takes time to achieve. Since 1945, the actual employment in manufacturing industry which is attributable to schemes of all kinds that received official approval totals no more than about 64,000, or 13·3 per cent. of the 1948 labour force in manufacturing and extractive

industry combined.[1] These results, moreover, have been those of a period favourable to new industrial developments. Another drawback is that damage is done to the economy if firms go to the Area and incur higher private costs than by going elsewhere. Again, the influx of new industry might harm the existing industry of the Area—*e.g.* by raising labour cost, taking up desirable factory sites and, generally, by denying freedom to manoeuvre. Still further, the additional new industry might cause the total demand for labour to outrun the Area's aggregate supply of it. Last, the policy of introducing new industry might not be administered effectively. Thus, if the new firms are merely branches of firms having their principal locations elsewhere, during depression the branches may be closed. The new industries might not be appropriate for the kind of diversification needed. They might not be sited at the best location—and so on.

Are these drawbacks conclusive? As for the first, it may, in fact, take less time to bring in new industries than to uproot and transfer the old ones. That would be the case when the new industries are originated by diverting firms to the Area before they set up somewhere else. Further, the lighter industry to be brought in is inherently more mobile than the heavier industry to be taken out. Still further, some—at least—of the new industry could be chosen because of its expansionary possibilities; and, once a sufficient nucleus is in being, more industry of similar or related sorts will develop. Lastly, a proposal is made later to expedite the influx of new types of industry into the Area.

As for the fear that firms might be brought to the Area that could operate elsewhere at lower private cost, this need not occur. For the consumption goods and home-market industries which the Area requires are lighter industries capable of being located in different parts of the country without material differences of private cost. The important question is whether there is sufficient of this lighter industry in the country to render possible the effective industrial diversification, not only of the North-Eastern Area but also of all the areas

[1]The estimated potential employment is 108,000, or about 22½ per cent.

highly vulnerable to cyclical unemployment. The parts of the country most vulnerable, because they are extremely dependent upon investment goods and export goods industries are the North-East, South-West Scotland, West Cumberland, Merseyside, and South Wales. The total labour force in their manufacturing industries in July, 1948, was 1,176,000. Of this total, some 348,000 were attached to industries that were less liable to cyclical fluctuation because those industries belonged to neither of the above categories. They are consumption goods and home-market industries falling into the following broad groupings—light chemicals; electrical consumption goods; manufactures of wire; light metal products; watch and clock; road vehicle repairing; leather goods; clothing; furniture; boxes and containers; food, drink and tobacco; paper and printing; toys and sports goods; scientific instruments; plastic goods.[1] The percentage of the labour force in these industries, relative to the total labour force in manufacturing industry in the areas named was 29·6. The comparable figure for Great Britain was 35·8. The figure for Great Britain, excluding the areas named, was 37·1. If the above-mentioned cyclically-less-sensitive industries were so shared out that these vulnerable areas came to possess the same proportion of them to their total of manufacturing industry as the rest of the country, the latter would have to yield up little more than one-thirtieth of its existing stock of such industries. Such a result may fairly be held to support the view that there is sufficient lighter industry in the country to render possible the effective industrial diversification of those specific areas that are vulnerable to cyclical depression.

[1] In greater detail, the industries are—pharmaceutical chemicals; soaps, detergents, polishes; paints; electric wire and cable; telephone apparatus; radio, batteries; office machinery; refrigerators; small electric motors; vacuum cleaners; electric lamps and fluorescent tubes; dynamos; repairs to, and parts and accessories for road vehicles; perambulators; domestic hollow-ware; containers of metal and wood and cardboard; metal windows; various metal smallwares; scientific apparatus and instruments; musical instruments; toys and games; sports goods; leather products; tailoring; dressmaking; dress goods; overalls, shirts, etc.; footwear; tobacco, and all kinds of food and drink products; paper, paper board, printing and stationers' goods; plastic goods; furniture of wood and metal; rubber and rubber goods; linoleum; brushes and brooms; cinematograph films and photographic materials.

It could be objected, of course, that the possibility of actually transferring such cyclically-less-sensitive industries to the vulnerable areas must be ruled out because those industries are not necessarily mobile. Investigation shows, however, that since 1945 firms in each of the industries have either transferred undertakings to the areas from elsewhere, or newly started in them.[1] They have done so, it is true, with the help of the government; yet without the inducement of a specific subsidy in aid of their costs of production. And while some firms may have erred in locating themselves in the areas, it hardly seems likely that the majority have erred. It could be argued that since, relative to the total firms in each industry, only a few have moved to the areas no proof has been given that the industries, *qua* industries, are mobile. But the fact that some firms have moved, suggests that others may be able to do so—up to the proportion of one-thirtieth named above.

A last argument on this matter of costs may be mentioned. It is not private costs alone, but these together with the costs of industry that fall upon the community, that should be reckoned. Even where private costs would be higher in the Area than elsewhere, such community costs may be lower—and by enough to more than offset the higher private costs.[2]

As for the contention that the existing industries of the Area may be harmed by introducing alternative, diversifying industry, the probable harm is not substantial. The additional labour demand by the latter would occur slowly enough to enable the former to adjust themselves to the altered situation; the existing industries already command the sites they need; and their external economies—which are, indeed, important—continue. There is more in the contention that the additional industry may exhaust the Area's labour supply. But the

[1]Firms have also transferred undertakings to, or started new enterprises in, the vulnerable areas in industries other than those mentioned—*e.g.* glass and safety glass; aluminium goods; omnibus bodies; spring seating and upholstery; transmission belting; fibre board and insulating materials; rayon and nylon; knitting wools; distilling; earthenware; worsted yarn spinning and weaving; bedding. A full list contains many industries engaged upon consumption and home-market goods.

[2]I have dealt with this point in *The Manchester School of Economic and Social Studies*, January, 1951, pp. 80-83.

present labour reserves of the Area are greater than in the country generally,[1] and during the next fifteen to twenty years the expansion of the labour force will outstrip that in most other regions. Unless, moreover, diversification reduces the labour force in the industries vulnerable to cyclical depression, it will not fully succeed. The danger feared will not appear, then, for some time. When it does, the timing of the influx of alternative industry can be modified. As for the last contention—that there will be mistakes in applying the policy of diversification, these are not unlikely. They can be lessened if administration is constantly fortified by knowledge.

To pass now to the advantages offered by industrial diversification, these are undoubted. By expanding home-market and consumption goods industries, the adverse effects of cyclical depression on the Area's investment goods and mainly-export trades may be lessened ; for the former are less sensitive to it. Moreover, the scope for the general measures named earlier is increased. As said before, that scope is now gravely restricted because there are so few factories that make home-market and consumption goods. To increase their number, is an obvious, and essential, way of increasing the effectiveness of general measures. Still further, diversification makes it possible to establish industries that are new to the Area which are quicker to recover from depression than existing industries, or to withstand it better. Some new industries might even maintain export better than the Area's basic industries. Diversification may be specially valuable in providing outlets on the spot for workpeople discharged from cyclically-sensitive trades. Finally, it can confer more flexibility upon the economy of the Area.

Certain matters relating to diversification call for discussion. For example, where should it be applied ? Because the volume of mobile industry in the country is not limitless, and other areas vulnerable to cyclical fluctuation have claims upon it, not all parts of the Area should be diversified. Of the sixteen sub-regions of the Area, some have weaker claims than

[1]Unemployment since the war has been roughly double the national average ; the present ratio of female to male employment is under three-fifths of the national ratio.

the rest. They are—North Tyneside West; West-South-West Durham; Central Durham; parts of Tees-side (in or near Billingham, Stockton, Thornaby and Wilton); Darlington; and Cleveland. For none of these depends unduly upon a narrow range of cyclically-sensitive industry. North Tyneside West has no more than 26 per cent.[1] of its total insured population in its main industries of coal, engineering, metals, and shipbuilding; West-South-West Durham 27 in coal and metals; Darlington 31 in metals and engineering; Central Durham 33 in coal; and Cleveland 36 in metals and engineering. The parts of Tees-side named are an exception—the chemicals industry predominates. But this is a multiple-product industry, parts of which are not very susceptible to cyclical change. In capital goods alone, no sub-region has very high figures. Central Durham has 6 per cent. of its total insured population; West-South-West Durham 23; North Tyneside West 25; Darlington 32; and Cleveland 39. As for export, the ratio of exports to total output is lower than the average for the other sub-regions. Again, the above-named sub-regions enjoy moderate diversification. Thus, agriculture, bricks, pottery and glass, textiles, clothing, leather, food, drink and tobacco, woodworking, paper and printing, and other manufactures account for the following percentages of the labour force in agriculture and manufacture—Darlington 24, Cleveland 25, North Tyneside West 29, West-South-West Durham 33, and Central Durham 35.

The sub-regions having stronger claims[2] to diversification are—South-East Northumberland; South Tyneside West, and East; North Tyneside East; North-West, North-East, South-West, and South-East Durham; other parts of Tees-side (in or near Middlesboro, South Bank, Haverton Hill and Redcar); Wearside; and Hartlepools. They all depend more on a narrow range of cyclically-sensitive industries. South-East Northumberland has 61 per cent. of its total insured population in coal. In North and South Tyneside East shipbuilding,

[1]These, and following figures, are for July, 1948.

[2]These sub-regions had abnormal unemployment rates in the world depression—in 1932 the average figure was almost 37½ per cent.

engineering and coal account for 43 and 50 respectively. In South Tyneside West these, with metals, absorb 40. The four Durham sub-regions (South-West, North-West, North-East, South-East) have 45, 51, 53 and 74 in coal respectively. On Wearside, coal, shipbuilding, and engineering absorb 43. The Hartlepools have 38 in engineering, metals and shipbuilding—*i.e.* over two-thirds of their labour force in extractive industry and manufacture. On Tees-side, South Bank has 56 in metals, Haverton Hill 50 in shipbuilding, and Middlesboro has high concentrations in metals and heavy engineering. The above are capital goods industries or other investment goods industries. In addition, these sub-regions export substantially —and more than the others. Lastly, the existing diversification is weak. The alternative industries mentioned above account for the following percentages of the labour force in agriculture and manufacture—South-East Durham 3, North-East Durham 4, each of North-West Durham, South Tyneside East and South-East Northumberland 6, North Tyneside East and the Hartlepools 12, South-West Durham 13, Wearside 15, and South Tyneside West 20.

Next, how can the labour needed by the newly-introduced industry be secured? The more obvious sources are—by absorbing persons now unemployed (some 30,000) ; by tapping the Area's labour reserves—the greater part are females ; from juveniles entering industry ; by restraining the size of cyclically-sensitive industries, as proposed earlier ; by absorbing persons thrown out of work during depression ; and by pressure upon existing cyclically-sensitive industries to economise their labour forces. Each of these may contribute. Yet the largest source will probably prove to be the release of labour by industries expected to undergo contraction as the years pass. Thus, contraction in the Area's coalmining is expected to release some 30,000 persons during the next fifteen years ; iron and steel reorganisation promises to reduce the industry's labour demand ; and, lastly, some of the Area's heavy engineering is likely to contract.

What kinds of industry are needed to diversify? The paramount need is for industries that will suffer less from

cyclical depression than the existing basic industries. These would include consumption goods and home-market industries that produce necessaries and articles in inelastic demand. They would also include service industries which fall away less during depression. Export trades serving primary needs that are not seriously abated by cyclical fluctuation would not be ruled out. Alternative industries of these varied sorts [1] that use more male than female labour would have particular value.

Finally, how can the diversification of the sub-regions named earlier be expedited? A study of the birth of new firms during 1948-50 suggests that large reliance cannot be placed upon newly-originating industry—remembering that other vulnerable areas also have claims upon it. Therefore, transfer of existing mobile industry from elsewhere is necessary. This may call for greater inducements than exist now. The most effective one is likely to be a subsidy—to both new firms starting in the Area and those transferring there. This need not burden the community by its full amount, because in some cases it will reduce the costs borne by the community—*e.g.* when social capital equipment would cost more elsewhere than in the Area, if industry expanded elsewhere instead of going to the Area; or again, when the many economic costs of industrial and human congestion were greater elsewhere than in the Area. Moreover, the subsidy could be partly—even wholly—recouped if a tax were laid upon firms electing to set up in such congested areas instead of in the Area.[2] Such a tax could be supported inasmuch as further congestion would impose further costs upon firms now in congested areas, and also involve waste of economic resources additional to that now occurring. At worst, an unrequited subsidy would not be a dear price to pay if it enabled serious localised unemployment that is escapable to be avoided. From the technical standpoint, a subsidy of given amount would have the merit that it would afford greater gains to industries which experience smaller differences of costs elsewhere compared with the Area. These would be the mobile industries which it is desired to

[1] Of the kinds named on p. 95.

[2] I owe this suggestion to Mr. J. D. Ilett.

attract to the Area. The most likely sources of them are the London, South-East, East Midland, and West Midlands regions. For such mobile industries are there in strength. Further, especially in London and parts of the Midlands, industrial and social congestion is acute. Nor would the loss of a part of their mobile industries necessarily harm them seriously. For they enjoy substantial diversity of industrial structure; they possess a number of expansionary industries which could compensate; further accretion of industry would, over a term of years, necessitate immigration of labour on a considerable scale; and to reduce industrial and social congestion there would be an economic gain.

The fourth method of accomplishing the ends named at the beginning of III is to differentiate the output of firms in the existing investment goods and export industries of the Area. The proposal is to cause firms in these to modify their plants so that they can make additional products that are less sensitive to cyclical ups and downs. This is tantamount to self-diversification of such firms. Thus, an undertaking now making marine engines would make also, say, small engines to propel bicycles. The fall in output of marine engines during a slump would be met by a rise in output of bicycle engines. If need be, the State could take action to foster demand for these latter during the slump.

There are, of course, drawbacks to the suggestion. In some cases (*e.g.* coalmining), such self-diversification is not feasible. In others, for varied reasons, firms may not respond. Industrial specialisation in the Area, it could be argued, would be harmed. Costs of the alternative manufacture might be higher in the Area than elsewhere. Firms would have to expand their capacity, and their total labour force.

Firms would respond more readily if a subsidy were given to assist in financing the extra plant needed. Such a subsidy would be no less justifiable than a subsidy to attract firms to the Area from elsewhere, and it meets the criticism that the latter subsidy would not benefit firms already in the Area. Existing industrial specialisation need not be thwarted, since the physical facilities for it would be in no way impaired. The

lighter forms of industrial activity, represented by such self-diversification, could be undertaken at costs not substantially different from those prevailing elsewhere in the country. If the firms restrained the development of such alternative kinds of production during prosperous times, there need be no considerable rise in their demand for labour. The scheme is, after all, a logical additional way of diversifying the Area's industry. It is, besides, both a more comprehensive and a speedier way of doing this than the piecemeal method of importing new industry bit by bit. Such action has proved feasible for many firms in the rest of the country. Lastly, it could help to reduce that inflexibility of industrial structure which now makes the Area particularly vulnerable to cyclical fluctuation.

IV

To summarise : localised cyclical unemployment can be combated by the general measures named in II, and by the specific action described in III. But the effectiveness of the former is highly dependent on the latter. For general measures can only be applied successfully if the means of doing so are provided by the kinds of specific action outlined. Moreover, such specific action would help to counteract the Area's unemployment during slump not only by reducing its present disproportionate commitment to investment goods and its strong reliance upon export, but also by facilitating the transfer of resources to industries able to continue at a high level of output and employment—unaided by general measures —despite the slump.

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World Production, Prices and Trade, 1870-1960

The level of international trade depends upon the level of world production, and on prices ; and, since prices depend on production, the level of international trade is thus a direct function of world output. The purpose of this article is to unravel these relationships, and to express them quantitatively. It will emerge that, apart from the effects of war, if we have certain index numbers of production, we can deduce from them the index numbers of prices and of international trade.

The process of unravelling has to be done in stages. First we examine the statistics of world trade in manufactured commodities, and show how these can be derived from statistics of the quantity of primary products entering into world trade, and of the terms of trade. Then we relate the quantity of primary products to world production of manufactures. And finally we relate the terms of trade to world production of manufactures, on the one hand, and of primary products on the other. Thus eventually we are able to deduce trade and prices from statistics of production.

I. World Trade in Manufactures.

For statistics of world trade as a whole, we are dependent upon magnificent work done by the League of Nations. In *Industrialisation and Foreign Trade* series were published extending from 1876 to 1938, and showing separately the trade in manufactures and the trade in primary products. These figures were published as quinquennial averages. Subsequently they have been revised, and a new series exists of annual figures, extending from 1881. These figures have not yet been published, but they have been made available to me by the courtesy of Dr. F. Hilgerdt, now of the United Nations Secretariat, who has been responsible for their compilation. It is these annual figures that have been used in this article for the analysis of international trade.

TABLE I

WORLD PRODUCTION AND TRADE

	Production			Trade		
	Manufactures		Food	Manufactures Ratio, %	Primary Products	
	A	B			Value	Quantum
	1	2	3	4	5	6
1870	19·8	23·8	—	—	—	—
1871	21·5	25·9	—	—	—	—
1872	23·6	27·9	—	—	—	—
1873	23·5	28·0	—	—	—	—
1874	23·5	28·2	—	—	—	—
1875	22·8	27·4	—	—	—	—
1876	23·6	28·7	—	—	—	—
1877	24·2	29·1	—	—	—	—
1878	24·7	29·3	—	—	—	—
1879	25·1	28·8	—	—	—	—
1880	27·4	30·4	—	—	—	—
1881	28·8	31·5	—	35·6	36·4	36·2
1882	30·8	34·1	—	36·6	37·5	37·1
1883	31·9	35·4	—	36·5	37·8	38·7
1884	31·0	34·7	—	37·7	36·0	39·0
1885	30·7	35·0	—	37·9	33·9	39·2
1886	32·6	34·8	—	38·2	33·4	41·1
1887	34·9	37·7	—	38·1	34·3	42·5
1888	36·8	40·2	—	39·2	36·2	43·4
1889	39·8	43·8	—	37·4	40·0	46·8
1890	41·9	45·2	—	37·0	41·6	48·4
1891	42·3	45·4	—	34·7	43·1	50·0
1892	42·8	44·5	—	34·3	40·7	49·5
1893	41·2	44·8	—	35·3	39·9	49·1
1894	42·5	47·6	—	35·2	39·6	52·7
1895	46·7	50·3	—	35·6	40·4	56·4
1896	47·7	53·8	—	37·1	42·3	57·9
1897	50·0	55·9	—	36·0	44·8	61·0
1898	54·5	59·7	—	33·9	47·5	64·7
1899	58·5	63·3	—	35·2	50·4	65·6
1900	58·7	63·1	—	34·4	53·9	62·5
1901	60·9	62·5	—	34·8	53·9	65·6
1902	65·9	66·3	—	35·1	55·6	68·8
1903	67·3	67·6	—	34·9	59·5	72·0
1904	67·5	70·4	—	35·6	61·2	73·9
1905	74·7	74·7	—	36·6	65·2	78·4
1906	78·1	76·8	—	36·1	71·4	80·4
1907	80·6	80·1	—	36·1	75·1	80·4
1908	73·5	77·5	—	38·9	69·0	77·7
1909	81·0	81·7	—	36·3	76·4	85·7

TABLE I—*continued*

WORLD PRODUCTION AND TRADE

	Production			Trade		
	Manufactures		Food	Manufactures Ratio, %	Primary Products	
	A	B			Value	Quantum
	1	2	3	4	5	6
1910	86·4	87·4	—	35·0	84·7	87·0
1911	87·8	91·6	—	35·7	88·2	92·6
1912	95·4	96·6	—	36·0	97·5	99·7
1913	100·0	100·0	100	37·0	100·0	100·0
1921	85·5	77·7	96	41·5	104·5	79·7
1922	104·8	92·2	104	41·1	112·5	92·1
1923	109·9	90·9	108	39·6	122·1	85·5
1924	116·3	106·2	107	38·0	40·0	99·0
1925	125·4	111·9	113	35·9	165·0	110·8
1926	129·9	114·3	112	36·8	155·0	109·0
1927	138·9	128·4	117	36·8	163·0	120·1
1928	144·4	133·3	122	38·3	164·7	124·8
1929	154·8	139·3	121	38·7	167·0	132·3
1930	135·5	127·9	121	38·8	136·1	130·1
1931	116·7	113·8	123	39·2	95·6	122·3
1932	100·0	103·9	125	36·5	67·3	114·8
1933	112·9	113·7	127	37·0	59·5	111·9
1934	125·3	127·4	126	37·6	56·4	110·2
1935	139·8	139·4	124	37·0	58·4	117·3
1936	157·4	149·5	128	36·5	63·7	121·6
1937	172·6	164·6	131	36·7	78·3	133·6
1938	154·5	161·4	133	40·1	63·8	118·6
1950	250·3	200·9	139	36·4	184·0	147·9

Series 1. *World Production of Manufactures, including the U.S.A., but excluding the U.S.S.R.*

Series 2. *World Production of Manufactures, excluding both the U.S.A. and the U.S.S.R.*

Series 3. *World Production of Food, excluding the U.S.S.R.*

Series 4. *Ratio of the value of Manufactures imported by all countries, to the value of all imports.*

Series 5. *The value of Primary Products entering into international trade.*

Series 6. *The quantity of Primary Products entering into international trade.*

All Series are index numbers, with 1913 as base, except Series 4. For notes on sources, etc., see Statistical Appendix.

If we look at the statistics of world trade in manufactures, the most striking fact which emerges is that, in terms of money value, the trade in manufactures is more or less a constant proportion of world trade. This can be seen by running one's eye down series 4 in Table I. The proportion was 35·6% in 1881, and 36·4% in 1950. The average of the figures appearing in series 4 is 36·9%.

The relative constancy of this proportion over seventy years is a baffling phenomenon. Some people would expect to find the trade in manufactures an increasing proportion of world trade over the years, because world production of manufactures increases more rapidly than world production of primary products. Other people, on the other hand, expect the opposite; they would have expected the spread of industrialisation through the world to diminish the share of manufactures in world trade. Neither school has been right.

There is a plausible explanation for the constancy of the share of manufactures. World trade consists, to a large extent, of the exchange of manufactures against primary products. Industrial countries import the larger part of the primary produce entering into international trade, and non-industrial countries import the larger part of the manufactures. According to a League of Nations calculation,[1] the twelve leading manufacturing nations took 74% of the primary products entering into international trade in 1935, but only 35% of the manufactures. In so far as world trade consists of an exchange of manufactures for primary products, the proportions cannot change; an increased purchase of primary products will be associated with increased sale of manufactures in the same proportion, and *vice versa*.

However, world trade is not exclusively an exchange of manufactures against primary products. If it were, the share of each would be 50%, whereas in fact the share of primary products is more than one and a half times as great as the share of manufactures. Some primary products are exchanged against each other; some manufactures are also exchanged

[1]Quoted in *Industrialisation and Foreign Trade*, p. 19.

against each other ; and there is an exchange of both against invisible services.[1]

There is therefore no *prima facie* reason why manufactures should be a constant proportion of world trade. Neither is the proportion constant from year to year. There are variations which cannot be explained. The annual variations do not fit the trade cycle, and cannot be reduced substantially by lagging (*e.g.* on the theory that this year's purchase of manufactures derives from last year's sales of primary products). Using moving averages gives less variation than does using annual figures, but there still remain differences of the average proportion from one decade to another which cannot be explained. It is not a matter of price, since the average proportion does not correlate with the price, being low in the 1890's, when manufactures are dear, and high in the 1930's when manufactures are again dear. Neither does it correlate with tariff levels. There is a fairly good correlation, before 1913, with the level of foreign investment, the share of manufactures being highest when foreign investment is highest ; but the relation breaks down altogether after 1913. Further analysis may reveal the secret, and explain what determines the share of manufactures in world trade. All that we can say at present is that over seventy years the annual proportion has seldom moved more than two points away from 37%.

Thus, if we treat the share of manufactures in world trade as constant, we do some violence to the facts, but not much violence. It is convenient to treat it as constant, and to see what follows.

Let us use the following symbols :

M_T, an index number of the volume of trade in manufactures ;

M_P, an index number of the price of manufactures in money ;

C_T, an index number of the volume of trade in primary products ;

C_P, an index number of the price of primary products in money.

[1] A. O. Hirschmann attempts to measure these exchanges in "The Commodity Structure of World Trade," *Quarterly Journal of Economics*, 1943.

Then, when we say that the share of manufactures is constant, we say that

$$M_T \times M_P = C_T \times C_P$$

the left-hand side of the equation yielding an index number of the money value of manufactures entering into international trade, and the right hand side yielding an index of the money value of primary products entering into international trade.

We are interested in the determinants of the volume of trade in manufactures, so we shall keep M_T only on the left-hand side, with the result :

$$M_T = C_T \times (C_P \div M_P)$$

$C_P \div M_P$ is the terms of trade between primary products and manufactures. The result is therefore equivalent to saying that, if we know the quantity of primary products being bought, and the price being paid for them (relatively to the price of manufactures), we can derive the quantity of manufactures.

Our next tasks are therefore to find the determinants of the quantity of primary products entering into trade, and of the terms of trade between manufactures and primary products.

II. The Quantum of Trade in Primary Products.

The fact that the leading industrial countries take three-quarters of the primary products entering into international trade, suggests that there should be some relationship between the wealth of these countries, and the quantity of this trade. For the wealth of these countries the simplest index to use is the index of world production of manufactures, which again we owe to Dr. Hilgerdt's splendid work for the League of Nations.

The index of world production of manufactures published in *Industrialisation and Foreign Trade* cannot be used for this purpose as it stands. In the first place, the U.S.S.R. must be excluded. There are two reasons for this. The first is that the League's index incorporates the official manufacturing index of the U.S.S.R. This index shows an enormous increase of production in the nineteen thirties, which is known to have been exaggerated by misuse of price statistics. However, even if a more correct U.S.S.R. series were available, it would still be

necessary to exclude the U.S.S.R. This is because the U.S.S.R. developed in the twenties and thirties as a self-sufficient economy, doing less international trade than Tsarist Russia. The growth of manufacturing in the U.S.S.R. is not therefore reflected in trade statistics, and before we make comparisons involving international trade we must first exclude the U.S.S.R. from the world index of manufacturing.

Similar reasoning, it turns out, applies to the U.S.A. For if we plot, year by year, quantity of primary products traded (corrected for price changes) against world manufacturing production, (excluding the U.S.S.R. but including the U.S.A.), on logarithmic scales, the result is almost a straight line from 1881 to 1913. But the figures for the nineteen twenties, though they also lie on a straight line, do not lie on the same straight line as those for 1881 to 1913. The line of the nineteen twenties lies to the right, indicating that there has been an increase of manufacturing production during the war without a corresponding increase of imports. Whereas, if one uses for manufacturing a series which excludes both the U.S.A. and the U.S.S.R., the result from 1881 to 1929 is a single straight line.[1]

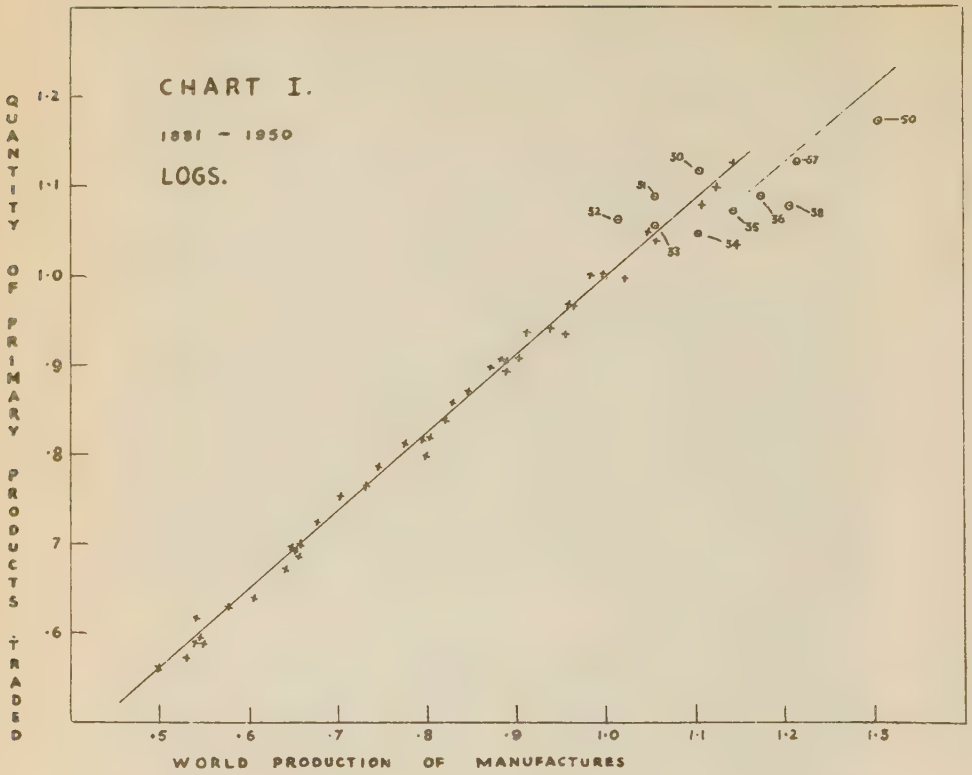
Table I gives both manufacturing series, series 1 including the U.S.A., and series 2, excluding the U.S.A. Both exclude the U.S.S.R. In Chart I, series 2 is plotted against series 6, on logarithmic scales. The result, from 1881 to 1929, is a straight line with the formula

$$\log C_T = 0{\cdot}1238 + 0{\cdot}8702 \log M_N$$

where C_T is the index number of quantum of trade in primary products, and M_N the index number of world production of manufactures (excluding both the U.S.A. and the U.S.S.R.), both index numbers from the base 1913 = 10·00.

It is not hard to see why a better result is obtained when the U.S.A. is excluded. For the U.S.A. economy is a largely

[1]It is anomalous to plot trade figures which include U.S.A. trade against output figures which exclude U.S.A. output, but this cannot be helped since we do not have separate annual trade figures for the U.S.A. and the rest of the world since 1881, on a comparable basis. The anomaly is not great because U.S.A. imports of primary products were only about ten per cent. of the world total in 1913.



self-sufficient economy. In the period 1881 to 1913, the U.S.A. and other countries expand pretty constantly, and the fact that they expand at different rates does not prevent our relationship from coming out as a straight line ; it merely helps to determine the coefficient of M_N. When we come to the war, however, the U.S.A. expands while the other countries do not. A straight line relationship is resumed after the war, but the relative growth of the self-sufficient U.S.A. prevents the two straight lines from being the same. When we plot instead an index which excludes the U.S.A., we get the same straight line right

up to 1929, and this indicates that the war had very little effect on the propensity to import of the major countries.[1]

The straight line which we have found shows that, for small changes, a 1% increase in world manufacturing is associated with an 0·87% increase in world trade in primary products.

Does not the price of primary products, *i.e.* the terms of trade, affect the relationship? The answer is in the negative. If we use the formula

$$\log C_T = a + b \log M_N - c \log P_C$$

where P_C stands for the terms of trade,

the elasticity of demand over the period 1881 to 1929 as a whole comes out at —0·02, which is hardly significant. On the other hand, if we use the same formula over short periods of a few years, we get quite high elasticities. The explanation is that there is a good correlation with deviations of the price from a moving average, but not with the average price itself. This is therefore, a spurious correlation.

The truth is that if we take C_T as dependent on M_N only, then actual C_T lies below the straight line in booms and above the straight line in slumps. This can be seen in the following way. If we use the results of our previous regression analysis, where the coefficient of M_N is 0·8702, and calculate from it what C_T should be in each year, we can divide actual C_T by calculated C_T, to show the divergence. We do this in the following series, running from boom year to boom year.

[1]Actually, if the war had had no effect whatever on the relationship between trade and output, the points for the Nineteen-twenties should lie not on the line extending from 1881 to 1913, but a little above it. This is because the disproportionate increase in U.S.A. output should be reflected in disproportionately larger trade. However, the difference is small, because U.S.A. trade is small. The meagre data available suggest that the coefficient of M_N for the U.S.A. only was about 0·8, and for the rest of the world about 0·85. From this we may calculate roughly that world trade in primary products in the 'twenties was about one per cent. lower than it ought to have been, having regard to levels of manufacturing output. This deficiency is well within the range of errors in the data. If there was a real deficiency, it is to be attributed to increased self-sufficiency promoted by the war, and not to tariffs, which were no higher in the 'twenties than in 1913 (cf. my *Economic Survey*, 1919-1939, p. 151).

PERCENTAGE DIVERGENCE BETWEEN ACTUAL AND CALCULATED C_T

1882	—3·9	1890	—2·1	1900	—5·4	1907	—1·0
83	—3·1	91	0·7	01	0·0	08	—1·6
84	—0·6	92	1·6	02	—0·2	09	3·6
85	—1·0	93	0·0	03	2·6	10	—0·8
86	4·4	94	1·9	04	1·7	11	1·3
87	0·7	95	4·0	05	2·5	12	4·2
88	—2·8	96	0·7	06	2·6	13	1·4
89	—2·6	97	2·6	07	—1·0		
1890	—2·1	98	2·7				
		99	—0·9				
		1900	—5·4				

The minuses, it will be seen, appear at the top and bottom of each column, the boom years, while the pluses are in the middle.

What this signifies is that, while it is true that trade falls in the slump and rises in the boom, the year by year fluctuation of trade is not as great as the year by year fluctuation of production of manufactures. Stocks of primary products are accumulated by importing countries during the slump, and are used up during the boom. Also, food consumption fluctuates less than does manufacturing output.[1]

(It is also noticeable that actual imports exceed expected imports for almost the whole of the 1890's. This is consistent with the fact that the 1890's were rather a depressed decade. But there may also be another explanation. When we were examining the ratio of the trade in manufactures to total trade, we were puzzled by the ratio for manufactures being rather low in the 1890's. Now, by quite a different route, we find the trade in primary products rather high in the same decade. The explanation of both these phenomena may be errors in the data. The process by which the League of Nations has split world trade into the categories of manufactures and primary products is rather rough, and it is just possible that too little has been assigned to the one and too much to the other in the 'nineties).

So far, we have noted only the existence of a straight line relationship from 1881 to 1929. Reference to Chart I will show what happened in the great slump of the 1930's. At

[1]No doubt most of the cyclical fluctuation can be explained without reference to price. Nevertheless there ought to be a significant price elasticity, both in the short run and in the long, because primary products include food, the demand for which is significantly sensitive to price changes.

first, trade fell less than production of manufactures, as we usually expect of slumps; the points move left of the line. Then, in 1933 and 1934, manufacturing revives, without any revival of trade. After 1934 something like a straight line relation may have been in course of re-establishment, with something like the old slope, but the movement is now well to the right of the old straight line. The industrial countries have become more self-sufficient, as a consequence of the slump.

It would, however, be wrong to assume that if we drew a line running more or less through the points for 1935, 1936 and 1937, with a slope of 0·87, we should be on a new path which took account of all the effects of the slump. Such a line would *over-estimate* the degree of self-sufficiency induced by the slump up to that time. For, one reason why trade was so low in those years was that the slump was worst of all in the United States, and so U.S. imports of primary products were abnormally low. Our manufacturing index does not include the U.S.A., but our index of trade does include the U.S.A.

We can see that this is important if we plot the trade figures against not the index which excludes the U.S.A., but the index which includes the U.S.A. Then the figures for 1921 to 1929 lie on a straight line, but the points after 1930 are all further to the left, in relation to their straight line than are the corresponding points in Chart I. Also, the point for 1938 lies on a line with the points for 1936 and 1937, instead of lying well below them as it does in Chart I. In fact the deficiency of trade shown in 1938 is only about 10%, as compared with the 21% that appears in Chart I. This deficit of 10% is a truer measure of the amount of self-sufficiency promoted by the slump in the industrial world as a whole up to 1938.

In Chart I we have put in a straight line running parallel to the original straight line, but 10% below it. If there was no further increase in self-sufficiency after 1938, the point for 1950 should lie on or about this straight line. But, as Chart I shows, it lies a further 9% below the lower line.

This further deficit in 1950 cannot as yet be interpreted. Some part of it may be due to measures taken to promote self-sufficiency in the thirties which had not fully fructified in 1938.

Some part of it may be due to the war—though, as we have seen, the first world war did not affect our straight line. Some part may be due to changes in the structure of manufacturing production, from industries which use much imported raw material to industries which are more labour intensive. And some part is due to the shortage of primary products since the war, which has caused some industrial countries to import less food and raw materials than they would have liked to do. We shall not know how much is due to this third cause until the shortage comes to an end. And not until then shall we know, as well, whether the incremental relationship of 0·87 has survived both the slump of the 'thirties and the second world war.

III. The Price of Raw Materials.

The third step in our analysis is to measure the determinants of the terms of trade. We take this in two stages; first to determine the price of raw materials, in terms of manufactures, and then to determine the price of food.

Hereinafter, whenever we use the word "price" we mean price in terms of manufactures: the "real" or "terms of trade" price. The relevant series are series 11 and 12 in Table II.

For demand we use world production of manufactures, excluding the U.S.S.R. (series 1). There could be no better theoretical index of demand. In practice, indices of industrial production are usually compiled partly by measuring the output of product and partly by measuring the input of raw materials. An index based wholly upon the latter would be an exact index of the consumption of raw materials, whereas an index based wholly upon the former should grow faster than the consumption of raw materials, because of increasing economy in raw material use. Our series probably under-estimates raw material economy.

For supply we had intended to use an annual index of world production of raw materials since 1870, devised by the late Carl Snyder. These figures have never been published, but two articles describing the series, and reproducing it in graphical form, were published by Mr. Snyder in the *Revue de l'Institut Internationale de Statistique* in 1934. Mr. Snyder gave

TABLE II

PRICES (IN GOLD) AND TERMS OF TRADE

	Prices (in gold)				Terms of Trade		
	Raw Materials	Food	Primary Products	Manu-factures	Raw Materials	Food	Primary Products
	7	8	9	10	11	12	13
1870	116	121	118·0	106	109·4	114·1	111·3
1871	104	126	112·8	110	94·9	115·1	103·0
1872	118	131	123·2	117	100·9	112·0	105·2
1873	121	131	127·0	119	101·7	110·1	106·7
1874	113	130	119·8	114	99·5	114·5	105·5
1875	107	126	114·6	111	96·4	113·4	103·2
1876	101	122	109·4	106	95·3	115·1	103·2
1877	97	131	110·6	105	92·8	125·4	105·9
1878	91	119	102·2	100	91·5	119·6	102·8
1879	86	113	96·8	97	88·7	116·5	99·8
1880	92	117	102·0	102	90·2	114·7	100·0
1881	89	118	100·6	99	89·9	119·3	101·6
1882	89	119	101·0	98	91·2	122·0	103·6
1883	87	114	97·8	97	90·2	118·2	100·5
1884	84	105	92·4	95	88·9	111·1	97·8
1885	79	98	86·4	90	87·7	109·0	96·0
1886	74	92	81·2	88	84·6	105·2	92·6
1887	74	91	80·8	86	86·1	106·5	94·5
1888	77	93	83·4	87	88·6	106·9	95·9
1889	79	95	85·4	88	90·3	108·6	97·6
1890	82	92	86·0	90	91·1	102·2	95·6
1891	79	97	86·2	90	87·8	107·8	95·5
1892	75	93	82·2	88	85·3	105·6	93·4
1893	74	92	81·2	85	87·0	108·3	95·5
1894	70	83	75·2	81	86·4	102·5	92·8
1895	66	80	71·6	80	82·5	100·0	89·5
1896	69	79	73·0	81	85·2	97·6	90·1
1897	69	80	73·4	80	86·8	100·6	92·3
1898	67	83	73·4	79	85·4	105·7	93·5
1899	74	81	76·8	81	91·4	100·0	94·8
1900	89	82	86·2	88	101·1	93·2	98·0
1901	81	84	82·2	86	94·8	98·2	96·1
1902	78	85	80·8	84	92·8	101·2	96·1
1903	81	85	82·6	86	94·2	98·9	96·0
1904	82	84	82·8	88	93·2	95·5	94·1
1905	81	87	83·2	90	90·5	97·2	92·9
1906	90	87	88·8	92	98·4	95·1	97·1
1907	95	91	93·4	95	100·0	95·8	98·3
1908	86	93	88·8	95	90·4	97·9	93·5
1909	85	96	89·2	94	90·4	102·1	95·0

TABLE II—*continued*

PRICES (IN GOLD) AND TERMS OF TRADE

	Prices (in gold)				Terms of Trade		
	Raw Materials	Food	Primary Products	Manu-factures	Raw Materials	Food	Primary Products
	7	8	9	10	11	12	13
1910	97	98	97·4	102	95·6	96·6	96·0
1911	94	97	95·2	97	96·9	100·0	98·2
1912	95	102	97·8	98	97·4	104·7	100·3
1913	100	100	100·0	100	100·0	100·0	100·0
1921	120	148	131·2	186	64·5	79·6	70·5
1922	119	127	122·2	161	73·9	78·9	75·9
1923	133	156	142·2	157	84·7	99·4	90·6
1924	133	154	141·4	153	86·9	100·7	92·4
1925	149	149	149·0	159	93·7	93·7	93·7
1926	141	144	142·2	156	90·4	92·3	91·2
1927	129	146	135·8	146	88·3	100·0	93·0
1928	124	144	132·0	148	83·8	97·3	89·2
1929	121	134	126·2	142	85·2	94·4	88·9
1930	99	113	104·6	133	74·2	84·7	78·6
1931	71	89	78·2	111	64·1	80·4	70·5
1932	53	67	58·6	90	58·8	74·3	65·1
1933	48	61	53·2	80	59·8	76·0	66·5
1934	48	56	51·2	71	67·6	78·9	72·1
1935	47	54	49·8	68	69·0	79·2	73·2
1936	50	56	52·4	68	73·4	82·2	77·1
1937	57	61	58·6	72	78·7	84·2	81·4
1938	51	58	53·8	72	71·1	80·9	74·7
1950	126	122	124·4	122	103·4	100·1	102·0

Series 7. Price of Raw Materials.
Series 8. Price of Food.
Series 9. Price of Primary Products (i.e. Food and Raw Materials together).
Series 10. Price of Manufactured Commodities.
Series 11. Series 7 divided by Series 10.
Series 12. Series 8 divided by Series 10.
Series 13. Series 9 divided by Series 10.

All Series are index numbers, with 1913 as base. For notes on sources, etc., see Statistical Appendix. For purposes of division, the original figures from which Series 10 has been derived, were used to one place of decimals.

a copy of the original figures to Mr. E. H. Stern, who in turn has very kindly made them available to me.

Unfortunately the Snyder series cannot be used for our purpose. In the first place, it rises more steeply than the manufacturing index, thereby suggesting that, with the passage of the years, the world used raw materials not more but less economically. If we accept the Snyder series, the world manufacturing index is too high in the 1870's ; while, if we accept the latter, the former is too low.

This difficulty is not fundamental, since we could escape it by starting our series in 1880 instead of 1870. A more fundamental difficulty is that the Snyder series and the manufacturing series follow each other very closely through boom and slump, and through secular depression and recovery. This is not only because the manufacturing index is partly compiled from raw material statistics. It is also because, raw materials being produced largely on a commercial basis, their output adjusts rapidly to demand. If the adjustment were complete, the two series would show exactly proportionate movements, and the difference between them would not in any way correlate with the price. In practice, the adjustment is not complete. Raw material production falls less in the slump, and rises less in the boom. But the adjustment is sufficiently large, both as between boom and slump, and as between one decade and another, to make it impossible to obtain a useful correlation with the price.

Here one would be stumped but for noticing a curious phenomenon. This is that, if one treats raw material production as having increased by a constant proportion from one year to the next, the result yields an excellent correlation with the price. The effect of doing this is to say that the price of raw materials depends not on demand and *actual* output, but on demand and *potential* output, which is obviously true ; if demand falls and output falls correspondingly, price will nevertheless fall because there is excess capacity. The boldness lies in assuming that potential output increases in constant ratio through boom and slump. The only defence for this assumption is that it works !

What we have done is to correlate five year moving averages (because our main interest is secular rather than cyclical) of demand and price, with a series which assumes a constant annual increase of potential output. We do this separately for the years before 1913, and for 1921 onwards, because we cannot assume that the war had no effect on the increase of potential output. The averages are geometric, since all the work has to be done in logarithms.

The result of this procedure is that what we get is not a demand function but a supply function. This function assumes that whatever supply is needed will be made available, and shows how the price varies as actual supply rises or falls relatively to "normal" supply.[1]

Because of doubt as to the validity of the manufacturing index in the eighteen seventies, we have used only figures for the years 1881 to 1913. This yields the result

$$\log P_{RM} = 0{\cdot}6806 + 0{\cdot}8622 \log M_Q - 0{\cdot}0131R$$

where P_{RM} is the index number of the price of raw materials (1913 = 10·00), M_Q is the index of manufacturing production (including the U.S.A.) and R is the number of years since 1871.

And, correlating from 1921 to 1938 yields the result

$$\log P_{RM} = 0{\cdot}0396 + 0{\cdot}8561 \log M_Q - 0{\cdot}0142N$$

where N is the number of years since 1922.

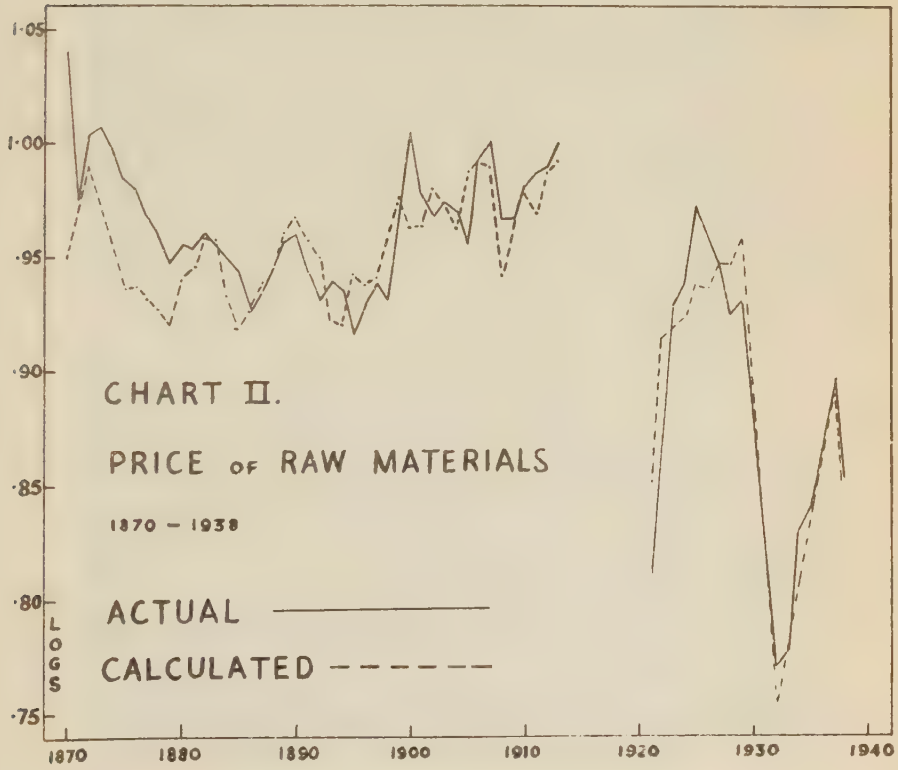
The coefficient of M_Q is the reciprocal of the elasticity of supply. Our first ground for confidence is that we get practically the same result for pre-war as for post-war years, namely an elasticity of supply of 1·16 or 1·17.

The coefficients of R and N show by how much the price would fall each year if manufacturing output were unchanged. Here also the results are very close, namely 3·1% per annum before the war, and 3·3% per annum thereafter. This coefficient is composed of three elements, namely of the annual increase in potential raw material production, of the annual fall in raw material consumption per unit of output, and of the

[1]If both demand and supply were elastic with respect to price we should need two equations. But we are assuming in effect that the demand for raw materials is absolutely inelastic. The resulting supply elasticity is a short run elasticity only. Long run supply is assumed (or rather "found") to increase at a constant rate, irrespective of price, after about 1880.

elasticity of supply. The higher post-war coefficient may be due mainly to the second of these elements, since the fact that post-war manufacturing indices are based more upon Censuses of Production and less upon statistics of raw material consumption would show up in our formula as an increase in the rate of economising the use of raw materials.

The second, and even more important ground for confidence, is that these formulae give an unexpectedly good fit ; unexpected because, though the work has been done with five year moving averages, which damp the cyclical and emphasise the secular movement, the formulae give a good fit when applied to the annual data. The fit is good both for the cyclical and for the secular movement. This can be seen in Chart II.



The differences revealed by Chart II are as interesting as the agreements. First, the points of inflexion are not exactly the same. They are the same from 1907 onwards, but before that, in about half the cases, the turning points of the actual price lag one year behind the turning points of the calculated price. This is because in the earlier years international trade in manufactures was dominated by textiles, whose price was very volatile. The price of iron and steel also fluctuated much more widely in the Nineteenth century than it did in the Twentieth. The prices of these manufactures turned just about as swiftly as the price of raw materials, and though the raw material price would within two years have moved in greater proportion, it was touch and go which would move more within the first twelve months. This lag has now disappeared.

There is also a significant difference between the actual price and the calculated price from 1873 to 1879. The price did not fall as much in those years as it should have fallen if world manufacturing output stagnated in this period as much as the index says that it did. The index is not very reliable for the seventies ; it is based on data for four countries only, and the data are highly speculative. And it is also possible that potential raw material output was not growing as rapidly before 1880 as it did thereafter.

IV. The Price of Food.

In the case of food, the supply fluctuates very little through boom and slump. We assume that food is produced, and sold for whatever price it will fetch. What our formula is then assumed to yield is a demand function. Doubtless the supply in any year depends on prices in previous years, but, so long as it does not depend on the price in the same year, this does not invalidate our equation.

A Snyder series exists, giving world production of food year by year since 1870. Unfortunately this series also is incompatible with the world manufacturing index. When put together, they yield an elasticity of demand which never falls below —1·5, and which is sometimes even positive, according

to the period one takes, and according to whether or not one deflates the series by an index of population growth. The trouble is that, according to the Snyder series, world food production grew at an average annual rate of 2·4% in the three decades before the first world war. This rate is not consistent with the growth of real income, as measured by the manufacturing index, in the sense that if food production grew as fast as this, the price of food should have fallen even faster than it did.

Of course, it is also arguable that the world manufacturing index is not a good index of the demand for food. It is, however, a better index than one might first think. It reflects the growth of population and the growth of wealth, and it concentrates on the movement of income of the industrialised world, which is also the part of the world with the greatest food production (more than four-fifths of the world total),[1] and the part which determines prices. An index of real income would be still better, but none exists.

For the period before 1913 we have no alternative to Snyder's index of food production, which we have had to abandon with great reluctance. But for the inter-war years we have a series devised by the League of Nations (series 3 in Table I), which yields the following result, when five year moving averages are correlated :

$$\log P_F = 1{\cdot}9000 + 0{\cdot}5821 \log M_Q - 1{\cdot}4908 \log F$$

where P_F is an index of the price of food, M_Q an index of the production of manufactures (including the U.S.A.), and F an index of food production (1913 = 10.00).

This formula inspires confidence, for several reasons.

In the first place, the coefficients are about what we would expect. The elasticity of demand is the reciprocal of the coefficient of F ; that is to say it works out at —0·67. Mr. J. N. R. Stone, in the *Journal of the Royal Statistical Society*, 1945, and Mr. J. Tobin in the same journal, 1950, find elasticities of demand for food in the United States ranging between —0·5 and —0·6. Food is more of a luxury to the

[1] As measured by League of Nations, *World Production and Prices* 1938/39, p. 93. If meat and milk are excluded, the share of Asia and Africa in world food production is about 40 per cent.

world as a whole than it is to the U.S.A., where the income elasticity of demand for food is lower. Hence our finding of an elasticity of —0·67 for the world as a whole seems very reasonable.

The coefficient of M_Q is slightly more complex. In industrial countries a 1% increase in manufacturing is usually associated with about a 0·5% increase in real income as a whole. Estimates of the income elasticity of demand for food vary widely, but the Allen and Bowley studies put it at around 0·8 for working-class families in Europe, whose incomes are above the average for the world as a whole. If we take it at 0·8, then a 1% increase in M_Q would increase the demand for food by $0{\cdot}5 \times 0{\cdot}8 = 0{\cdot}4\%$. And if the elasticity of demand is 0·67, this would raise the price by $0{\cdot}4 \times 1{\cdot}4908$, *i.e.* by 0·6%. The coefficient we actually get, 0·5821, is therefore very close to the coefficient we should expect.

The second ground for confidence is that the formula gives a good fit, even when it is applied to the annual data, as is done in Chart III.

The most exciting feature of the fit is the extremities. Neither 1913 nor 1950 was included, in deriving the formula, and it is therefore most satisfying to find that, despite the intervention of two wars, the formula still holds.

The actual price for 1913 is 100. The calculated price is 98. This difference of 2% is well within the range of error in the data. It could be fully accounted for if the League's food index is slightly more than 1% too low, or if the linking of post-war manufacturing or prices is out by a corresponding amount.

The calculated price for 1950 is 102·3. The actual price shown in Table II is 100·1. This again is well within the range of error. Moreover, as is explained in the Statistical Appendix, the price of food entering into world trade was rather less than the price of food as a whole, since the biggest buyer of food in international trade, the U.K., was getting some of her supplies in 1950 at prices below current world prices. The calculated price can therefore be regarded as an excellent fit.

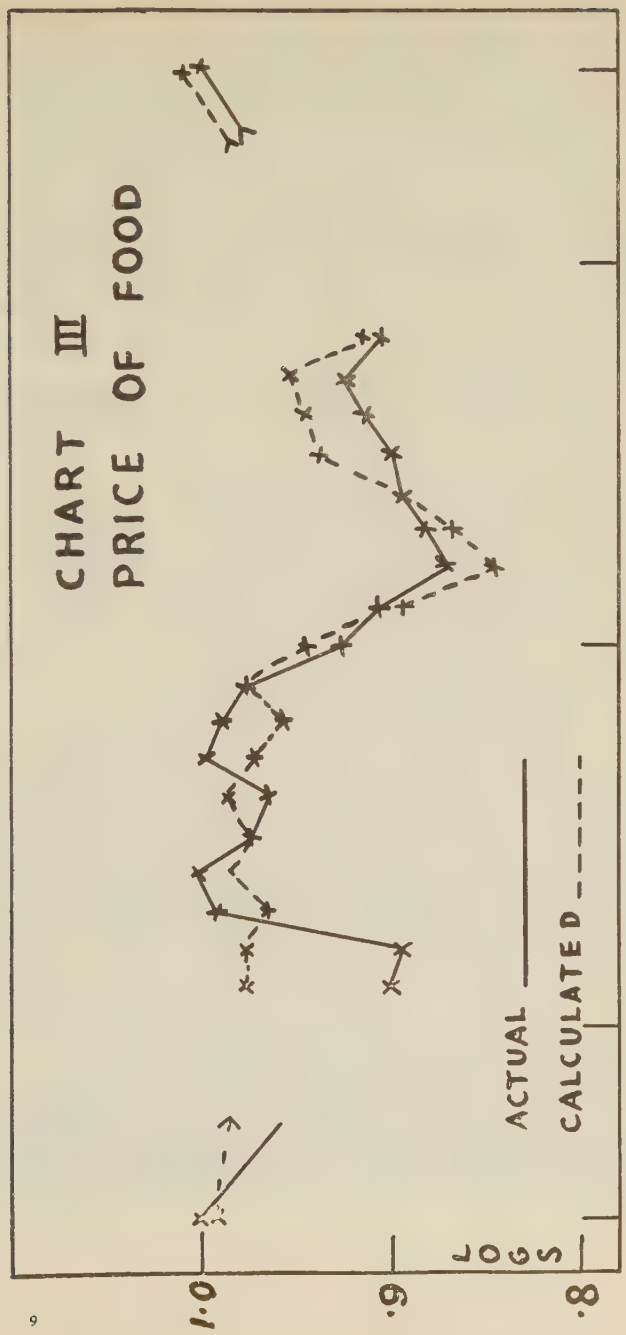


CHART III
PRICE OF FOOD
LOGS
1.0
.9
.8
1913
1920
1930
1940
1950
ACTUAL
CALCULATED

We have every reason for confidence in a formula which not merely conforms to expectations based on other data, but which also gives the right prices over the span of two world wars.

V. The Great Depression, 1873-1894.

Our major task is now completed. Given production indices, we can derive from them the level of trade in primary products, the terms of trade, and thence the level of trade in manufactures. In a moment we shall use these formulae for bold speculations about the future. But first, let us make some random remarks relating to the course of production and prices in the past.

Chart II brings out clearly the "Kondratieff" movement, both in raw material prices and in manufacturing production, from 1870 to the first world war.

The price of food is not shown in this chart. Its movement is not the same as that of raw materials. For one thing, the real price of raw materials was about the same in 1872 as in 1913, while the price of food shows a very large fall. And, for another, the two prices do not move together. The price of raw materials started to fall in 1873, and reached its lowest point in 1895, following in its course almost exactly the same path as industrial production. But the price of food rose in the seventies ; did not begin its dramatic decline until 1882 ; and did not check its fall until 1900. This has bearing upon the belief that the prices of all primary products move in sympathy with each other. This is not the case. As we have seen, the demand is the same in both cases, but the conditions of supply are quite different, the supply of food being much more inflexible not only secularly (the annual increase in raw material supply is nearly twice as great), but also cyclically.

The "calculated" series in Chart II is almost equivalent to the index of manufacturing production, after a secular trend increasing by 3·6% per annum has been removed.

It shows the Kondratieff downswing in production quite clearly, in that each of the slumps, up to a turning point in 1894, is very severe ; so that, even though the annual rate of growth of production from peak year to peak year is almost

constant from 1882 to 1907, the average production from year to year grows more slowly before 1894 than it does thereafter.

Chart II also shows that the upswing did not carry through from 1907 to 1913. The slump of 1908 was very severe, and the 1913 peak was rather low. If a fifty year cycle exists, it does not follow any simple pattern.

The same remark must be made about the twenty year cycle, to which Professor Brinley Thomas has drawn attention.[1] There is evidence that the boom which culminated in 1890 was more powerful than the boom which preceded in it 1882-83. One might speak of an eighteen year cycle, with peaks in 1872, 1890 and 1907, super-imposed upon a deep Kondratieff swing. The obstacle to this is the peak of 1899, which ought to be rather low, if it is to fit into an eighteen year cycle, but which, on the contrary, is very vigorous, however one measures it.

It seems premature to talk of long cycles. Certainly some booms are vigorous while others are mild, and some slumps are mild while others are severe. But there is no clear pattern in the order of the mild and the severe. *Ad hoc* investigation is still the most fruitful approach to this problem.

VI. The Inter-War Years.

We can make more progress in analysing what happened after 1913.

First of all, we can measure the cost of the war, in terms of its effect in lowering world production.

If we measure from the peak year 1890 to the peak year 1913, industrial production increased at a cumulative rate of 3·9% per annum. If it had increased at this rate from 1913 to the peak year 1929, the index would have stood at 182·3, instead of at 154·8. Hence the war cost four-and-a-half years of growth of industrial production.

The loss of potential raw material output can be measured by applying our pre-war formula to the post-war data, since both pre-war and post-war formulae show nearly the same rate of growth of output. The average price ruling in 1925-29 is

[1] "Migration and the Rhythm of Economic Growth," *The Manchester School*, September, 1951.

compatible with manufacturing production only if 1927 is year 54¾ since 1871. Since it is year 56, the loss of growth of raw material potential was 1¼ years.

The rate of growth of food production can also be derived from our formula. The average price and average demand ruling in 1888-92 are compatible only with a food production index of 66·7, and a rate of growth to 1913 of 1·8% per annum. Snyder's index is 58·3, and his rate of growth 2·4% per annum, probably because he gives too much weight to production in the Western world, and too little to the stable production of the rest. However, if we use our rate of growth, average production in 1925-29 should have been 128·2. If we take Snyder's rate of growth, it should have been 138·9. The actual figure was 116·9, which represents 5·2 years loss of growth at our rate, and 7·3 years loss at Snyder's rate. (The loss is so high at Snyder's rate that it confirms our opinion that his index very much over-estimates the pre-war rate of growth of food production).

This analysis shows that food production suffered more than any other activity from the effects of the war. The price of food was nevertheless lower in the twenties than it was in 1913. The explanation of this paradox is that the pre-war rate of growth was so high that it was causing the price of food to fall almost continuously. The war checked production relatively to demand, but not enough to prevent a further fall in the price.

The consequence of the lost years of growth of manufacturing production was that the terms of trade, which had been moving in favour of primary producers from 1895 to 1913, turned against them in the 'twenties. Stocks accumulated. The League of Nations index of stocks of primary products [1] shows end of year stocks accumulating steadily from its commencement in 1925 :

1925	1926	1927	1928	1929
76	82	86	90	100

Hence, when the boom broke in 1929, what might have been a slump of ordinary dimensions turned into a catastrophic fall of

[1] *World Production and Prices*, 1937/38, p. 121.

commodity prices, with all the serious deflationary effects which any violent fall of prices must be expected to bring in its train.

It is now possible also to understand what happened to international trade in the nineteen twenties. Trade was low in the sense that the rate of growth of the volume of trade from 1913 to 1929 was below the pre-war rate. But in any other sense the volume of trade was normal. As we can see from Chart I, the pre-war relation between trade in primary products and manufacturing production was well maintained ; there may have been a slight deficit of trade of about 1%. And the volume of trade in manufactures was even higher than we should have expected it to be, having regard to the level of manufacturing output and to terms of trade unfavourable to primary producers ; the share of manufactures in total trade was greater than before the war. Suggestions were being made in the twenties that trade in manufacturing had been reduced by the industrialisation of new countries. These suggestions can now be seen to be wholly without foundation.

In the 'thirties, trade in manufactures maintained its normal relation to trade in primary products, having regard to the terms of trade. But after 1933 the volume of trade in primary products shrank relatively to manufacturing production. This cannot be attributed to the industrialisation of new countries, since the industrialisation of these countries did not proceed any more rapidly after 1933 than it had done before. It is to be attributed rather to the measures taken by industrial countries to promote domestic revival without a corresponding increase of imports. The import of primary produce was too low, but, having regard to the level of these imports, and to the low prices paid for primary products, the trade in manufactures was as large as it ought to have been.[1]

VII. 1950.

If the first world war caused the terms of trade to move against primary products, why has the second world war moved the terms of trade in their favour ?

[1]This section supersedes the analysis of this problem given in my *Economic Survey*, 1919-1939, pp. 149-156. The argument is the same, but the statistical analysis is carried further.

Part of the answer is that this war had a relatively more devastating effect upon primary production, especially in the countries occupied by Japan. Thus, using the techniques of the last section, we may calculate that the second world war cost, in loss of years growth of production, 3·1 years for manufacturing, 12·3 years for raw materials, and 9·5 years for food (using our rate, not Snyder's).[1]

That manufacturing lost only three years of growth is due to the fact that, whereas the war checked production in every other country, its effect in the United States was to put an end to a slump which had lasted for ten years, and which had shown no sign of coming to an end. Thus, while production in the world excluding the U.S.S.R. and the U.S.A. increased only by 22%, between 1937 and 1950, production in the U.S.A. increased by 77%.

To say that raw materials production lost 12·3 years of growth is equivalent to saying that actual production in 1950 was no greater than *potential* production in 1938. But the real reason for this is not the war but the virtual cessation of foreign investment in the primary producing countries ever since 1929.

Between 1911 and 1913, the average annual capital export of Britain, France, Germany and the United States, to the rest of the world was $1,400 million. This dropped, between 1924 and 1928, to $860 million, worth, at 1911-13 prices not more than $550 million. (There was much foreign investment in the twenties, but the lion's share went to Germany, instead of to raw material producing countries). Then, after the great slump, foreign investment ceased altogether ; Britain and the United States, on the contrary, withdrew substantial sums from the rest of the world.

[1]The task of analysing the course of events since 1945 is made much more difficult by the fact that the United Nations has not resumed publication of two invaluable annual surveys which the League of Nations used to publish, *viz* : *World Production and Prices* and the *Review of World Trade*. In consequence, there are no longer series for world trade in primary and in manufactured commodities, for world prices, or for raw material production. This is a sad deficiency.

Actual production of raw materials, which needs to grow by about 40% in a decade, was only 16% higher [1] in 1937 than in 1929. And world food production per head of the population, which grows 8% in a decade, was no higher at the end of the 'thirties than it was at the beginning.

To the cessation of foreign investment we must add the effects of the war on agricultural production, which were particularly severe in the Far East. The natural result was an acute shortage both of food and of raw materials in 1950, and very favourable prices for primary products.

As we have already seen, the volume of primary products entering into international trade in 1950 was perhaps as much as 9% below what it should have been, in relation to world manufacturing production. The shortage of primary products probably accounts for most of this.

The volume of manufactures in world trade, on the other hand, was "normal," in the sense that it was what we would expect it to be, knowing how much primary produce was being sold, and the price it was fetching. The deficit in the volume of primary products was more than compensated by the rise in price, with the consequence that the volume of trade in manufactures was 36% higher in 1950 than it was in 1937.

VIII. 1960.

Given the level of production, we can use our formulae to derive prices and the level of international trade. It may help to draw the whole argument together if we guess at production levels for 1960, and then work the exercise.

Naturally, this is not a prediction for 1960. We have no means of knowing how rapidly production will grow in the course of the fifties. And we cannot be certain that our formulae will still apply in 1960, even where they give a good fit over many past decades. This is an exercise, and not a prediction.

To start the exercise, we have to guess at the levels of world manufacturing production and world food production in

[1] An index number of actual production of raw materials, from 1920 to 1938, will be found in League of Nations, *World Production and Prices*, 1938/39

1960. No guess can be made for an actual year, since much depends on where the year fits into the trade cycle. When we speak of 1960, therefore, we mean the average of the five years 1958 to 1962. Similarly, our year of departure, 1950, has to be assumed to be an "average" year.

No guess can be made, also, if there is a major war. The exercise assumes that no major war occurs in the Nineteen fifties.

World manufacturing production, including the U.S.A., increased by 3·9% per annum from 1890 to 1913. If we manage slumps better in the fifties than we did in the past, it may increase perhaps by 5% per annum. It is quite possible that there will not be enough raw materials even for the lower of these rates, but we shall assume that the necessary foreign investments will be made. We shall work with both 3·9% and 5% per annum. Corresponding increases for world manufacturing production, excluding the U.S.A., are 3·3% and 4·2%.

According to our formula, the pre-1913 rate of growth of food production cannot have exceeded 1·8% per annum, though Snyder's index puts it as high as 2·4% per annum. The prospects for food production in the nineteen fifties are not bright. There is little foreign investment taking place in agricultural countries ; political conditions are insecure ; there is no longer a stream of international migrants settling on virgin soils ; and most countries seem intent on fostering industry rather than agriculture. All these adverse circumstances may be changed as food prices rise, and make agricultural production very profitable relatively to other activities. High prices are bound sooner or later to stimulate supply. But this effect may not be fully felt within the next ten years. We work therefore with two assumptions ; that food production may increase by 2% per annum, and that it may increase only by 1·3% per annum.

We now apply our formulae to these assumptions.

First, if the incremental relationship between manufacturing production and volume of trade in primary products is still 0·87, then trade will increase by 35% on the lower

assumption, or by 43% on the higher assumption. Now, as we have seen, there was a shortage of primary products in 1950. If primary production increases sufficiently to make this good, trade will be correspondingly larger in 1960. But, in what follows, we ignore this possibility.

There is another very important possibility which we ignore. So far, all our production figures have excluded the U.S.S.R. This is because the U.S.S.R. is almost self-sufficient. This, however, may not continue. All available evidence suggests that the U.S.S.R. is increasing production of manufactures at an enormous rate, while failing to make corresponding headway in agriculture. The effect of this, sooner or later, must be to drive the U.S.S.R. into the world markets for primary products, and to cause a large expansion of the trade in these products, and a big increase in their prices. Much the same is happening in the other countries under Soviet influence, with ultimately the same result. Whether this will be effective by 1960 cannot be foretold, and we ignore the possibility in subsequent calculations.

We calculate next the price of raw materials, using the formula for 1921-1938. It is rash to assume that this formula still holds. The annual increase in potential output of raw materials has probably dropped, because of the drying up of foreign investment. The elasticity of supply may be smaller upwards than downwards. And raw material economy may be greater because of high prices. To use the 1921-1938 formula is to assume that any such changes cancel each other out, and this is obviously rash. The result, nevertheless, is that raw material prices are the same in 1960 as in 1950, on the lower assumption, and are 10% higher on the higher assumption. Both these figures are probably seriously under-estimated.

If manufacturing production is assumed to grow only by 3·9% per annum, while food production grows by as much as 2% per annum, then the price of food will fall 8% by 1960. At the other limit, if manufacturing grows by 5%, and food only by 1·3%, then the price of food will rise by 10%. The other alternatives lie within this range.

These food and raw material prices combine to give terms of trade for primary products as a whole with a lower limit of a fall of 3% and an upper limit of a rise of 10%.

We can now calculate the level of trade in manufactures. For this we assume that the share of manufactures in world trade will be about the same in 1960 as it was in 1950. This is the most confident of all our assumptions so far. Then, applying the upper and lower limits of the volume of trade in primary products, and of the price of primary products, we conclude that the volume of trade in manufactures will increase by between 31% and 57%.

These results may be tabulated as follows :—

INDEX NUMBERS IN 1960, BASE 1950 = 100

	Lower assumptions	Higher assumptions
Manufacturing Production	147	163
Food Production	114	122
Price of Raw Materials	100	110
Price of Food	92	110
Trade in Primary Products	135	143
Trade in Manufactures	131	157

Finally, it may be noted that our calculation of price comes out at a much lower level than that made by Mr. Colin Clark in *The Economics of* 1960. Mr. Clark takes account of the affects of the further industrialisation of the Soviet countries, and his result should therefore be higher than our figure, which makes no allowance for these developments. Nevertheless, the difference is substantial. He predicts that in 1960 the price of primary products will be 90% above the average level of 1924-1935. Whereas our calculation lies between 22% and 39% above 1924/1935. No doubt there will be as many guesses about the level of 1960 as there are guessers.

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STATISTICAL APPENDIX.

Production of Manufactures.

A World index for 1870-1938 is given in League of Nations, *Industrialisation and Foreign Trade*, Annex A, with the figures for individual countries, from which it has been derived. The weights assigned to the U.S.A. and the U.S.S.R. were 42·5% and 4% respectively, and these weights were used for making the series given in Table I. These weights apply to the average of the years 1925-1929, and the series shown in Table I have to be calculated from the League's index with 1925-1929 = 100, and not from the index with 1913 = 100.

The World index incorporates Hoffman's index of industrial production in the U.K. The downward bias of this index is such that, when comparison is made with the Censuses of Production of 1907 and 1924, Hoffman's index is seen to under-estimate the increase of post-war production by at least 20%. Accordingly, 20% has been added to the post-war U.K. figures used in the World index, thus increasing this index by rather less than 2%.

The figures for 1950 are derived from United Nations, *Monthly Bulletin of Statistics*.

Production of Food.

This is based principally on two League of Nations' indices. *The Memorandum on Production and Trade*, 1923 *to* 1928/29, contains an index of food production for 1913 and from 1923 to 1928, while *World Production and Prices* 1938/39, contains an index from 1925 to 1938. The latter index includes vegetable oils and tea, coffee and cocoa, which the former does not, but the *Memorandum* gives the information necessary for devising an index which includes these commodities. Both publications also include information on the U.S.S.R. share of production, which is excluded from the index shown in Table I. The coverage of the latter index remains more complete than that of the earlier (it includes also milk, fruit and fish, for which earlier information is not available), so the two series have been linked at their earliest common year, which is 1925. Neither of these series includes 1921 and 1922, which have been taken from a third League of Nations index, also published in the same number of *World Production and Prices*, which is comparable with the other index in that volume, except that it excludes livestock products.

The figure for 1950 is calculated from Food and Agriculture Organisation, *The State of Food and Agriculture : Review and Outlook*, 1951, which gives an index of "food crops" on page 5, and gives other information about livestock, fruit and beverages on pages 51 to 67.

International Trade.

Quinquennial averages from 1876 to 1938 are published in *Industrialisation and Foreign Trade*. These figures have been revised,

and a new annual exists, which has not yet been published, but which has been made available to me by the courtesy of Dr. F. Hilgerdt, of the Economic Division of the United Nations.

The definitions of primary products and of manufactures are as in *Industrialisation and Foreign Trade*, Annex B.

The figures are in U.S. gold dollars of 1913 parity, which differ from U.S. dollars after the devaluation in 1933.

The revised sum of imports and exports of primary products in 1913 is 24,970 million dollars, and the revised sum of imports and exports of manufactures is 15,140 million dollars in 1913.

The figures for 1950 are estimated in a roundabout way, since the United Nations statistics do not distinguish between manufactures and primary products, as the League of Nations used to do.

The value of manufactures exported is calculated for 1937 and 1950 by Dr. H. Tyszynski, in his article "World Trade in Manufactured Commodities, 1899-1950," *Manchester School*, September 1951. This calculation shows an increase of 309% in sterling value, which translates into an increase of 132% in dollar value. The United Nations *Monthly Bulletin of Statistics* shows that the dollar value of all trade increased in the same period by 134%. The change in the ratio of manufactures to total trade can thus be calculated. Also, applying weights of 3 for primary products and 2 for manufactures, it follows that the value of trade in primary products increased in this period by 135%.

Prices.

The prices used in this study are not the same as those used in *Industrialisation and Foreign Trade*. In the first place, the League's study used the Sauerbeck index for the prices of primary products. Here, however, raw material and food prices are used separately, and the price of primary products in general is found by weighting according to relative importance in world trade. The series for prices of manufactures is also different. The main difference, however is in the prices chosen for the 1920's. *Industrialisation and Foreign Trade* uses British prices up to 1929. British prices, however, were out of line with world prices in the 1920's, the price of manufactures in particular, being too high. One consequence of this is that *Industrialisation and Foreign Trade's* estimate of the volume of world trade in the 1920's comes out at too low a level, as can be seen when it is compared with the estimate made by the League of Nations' statistical division, and published in the *Review of World Trade* for 1938. These latter estimates are much more reliable, since they are based on the individual trade returns of many countries.

The reliability of the series shown in Table II can be tested in the following manner. If we use weights of 9, 6 and 10 for raw materials, food and manufactures respectively (based on the above *Review of World*

Trade, p. 61), we can calculate an index of prices of all goods entering into international trade, which compares with the Review's estimate, and with the series used in *Industrialisation and Foreign Trade* as follows :

	1913	1924	1925	1926	1927	1928	1929
Our series	100	146	153	148	140	138	133
Review's estimate ..	100	146	151	141	139	138	133
I. & F. T. series ..	100	157	165	157	150	148	142

This good correspondence is due to using U.S. and U.K. prices, instead of U.K. prices only.

Prices for 1950 have been reached in a roundabout way, since no single country's prices are any longer representative of world trade.

The starting point is the United Nations *Monthly Bulletin of Statistics*, which shows the average price of all goods in international trade increasing from 1938 to 1950 by 107%. This is accepted, since the U.N. calculations are based on trade statistics of many countries.

In the same period, the dollar price of U.K. exports of manufactures rose 57%, and the price of U.S. exports of manufactures rose 76% (*International Financial Statistics*). The price of all exports from Europe (U.N. *Monthly Bulletin*) rose 75%. Not all of Europe's exports are manufactures, and the prices of primary products have risen by more than the prices of manufactures. Hence it is assumed that the average price of all manufactures entering into world trade has increased by 70%.

Using the same weights as before, it follows that the prices of primary products have risen by 132%.

The dollar price of raw materials imported into the U.K. rose by 156% between 1938 and 1950. In 1950 the U.K. was no longer getting any significant amount of raw materials on bulk contracts at prices below world prices. The corresponding U.S. increase was 136%. The two countries import rather different commodities. If we split the difference, the raw materials price is taken as having increased by 146%.

Applying the same weights as before, it follows that the price of food increased by 111%. It certainly increased, for the world as a whole, by more than the increase in the U.K. import price, which was 90% (food was still bought in 1950 on bulk contracts below world prices). The B.L.S. index of the wholesale price of food in the U.S. increased by 126%. The figure of 111% for world trade as a whole is therefore probably very near the mark, and this nearness itself confirms the other prices we are using for 1950.

As with the statistics of international trade, these prices are all expressed in U.S. gold dollars of 1913 parity.

Raw Materials. From 1870 to 1913 we use the composite price of raw materials imported into or exported from the U.K., which is given by Werner Schlote in *Entwicklung und Strukturwandlungen des englischen Aussenhandels*. From 1913 to 1929 the series in Table II is the unweighted arithmetic average of imports into the U.K., as given by Schlote, and

of imports into the U.S.A. of crude materials and of semi-manufactures, as given in the *Statistical Abstract of the United States*. From 1929 to 1938, the figures in the *Review of World Trade for* 1938 are used.

FOOD. From 1870 to 1913 the series is Schlote's index of the price of food imported into the U.K. From 1913 to 1929 we use the unweighted arithmetic average of food imports into the U.K., and of imports into the U.S.A. of crude foodstuffs and of manufactured foodstuffs. From 1929 to 1938, the figures in the *Review of World Trade for* 1938 are used.

MANUFACTURES. From 1870 to 1913 the series is the unweighted arithmetic average of the price of imports into the U.K. and exports from the U.K., given by Schlote. *Industrialisation and Foreign Trade* uses a weighted index, which gives much more importance to exports than to imports. The import and export series coincide at the beginning and at the end of the period, but not in the middle, the prices of British manufactures falling during the Great Depression much more than the prices of manufactures of other countries. Since the British share of world trade was much less than half, it is arguable that more weight should be given to the import than to the export series; on the other hand the composition of U.K. exports of manufactures is more representative of world trade than is the composition of U.K. imports. From 1913 to 1929 we use the unweighted arithmetic average of imports into and exports from the U.K. and the U.S.A. The two import series are very close together, and lie between the two export series, which are far apart. From 1929 to 1938, the figures in the *Review of World Trade* are used.

Costs of Distribution in Department Stores[1]

In 1929, Mr. F. J. Marquis, who is perhaps better known under his present title of Lord Woolton, addressed this Society on Problems of Retail Distribution. The problems about which Lord Woolton spoke in 1929, are with us to-day, twenty-two years later. Chief among them, the cost of retail distribution is the subject of my paper. Lord Woolton deplored the absence of statistical information regarding distribution. His paper, in fact, marked a turning point in the study and analysis of retail distribution, and it was largely his influence and that of Sir Henry Clay who presided at that meeting, which led in 1931 to the first systematic compilation of statistical information regarding retail trade. The collection of this information was carried out from amongst its members by the Retail Distributors Association in conjunction with the Bank of England which Professor Clay had recently joined as Economic Adviser.

The Retail Distributors Association in the main represents the larger department stores and it is not claimed that the firms participating are a representative sample of retail trade as a whole. Nevertheless, they do include firms whose sales turnover ranges from £50,000 to over £10 millions a year. For many years, the figures which these firms supplied month by month of their sales and stocks, were the only guide to the changing volume of retail trade. To-day the figures which the Board of Trade publish each month, are drawn from independent shops, multiples, co-operatives, as well as from the original contributors, the department stores.

These figures to-day provide not only a reliable guide to the movement of sales and stocks for retail trade as a whole, but they show the changes in the relative proportions of sales gained by the different constituents of the trade. And very significant and interesting these changes have been during the last two years. I regret that I have not had time in this

[1] This paper was read before the Manchester Statistical Society on 12th December, 1951.

paper to deal with these changes. These figures, however, relate only to sales and stocks and it remains true to-day that the only figures which have been systematically compiled over a period of years, relating to costs of retail distribution, are those collected by the Retail Distributors Association.

I said that Lord Woolton's paper of 1929 marked a turning point in the study of retail distribution. In 1932, the first two serious studies of the subject appeared—Lawrence Neal's " Retailing and the Public ", and Braithwaite and Dobbs " Distribution of Consumable Goods ". Although they gave an acute and objective analysis of the problems of distribution, they were handicapped by the lack of statistical information. Since the war, three major works by professional economists have been published :—

Mr. Henry Smith's " Retail Distribution ", originally published in 1937, a revised and largely re-written edition of which appeared in 1947 ;

Professor H. Levy's " The Shops of Britain ", published in 1948, and Mr. J. B. Jeffrey's " Distribution of Consumer Goods ", a factual study of methods and costs in 1938, published in 1950.

There is also an illuminating essay on "Competition in Retail Trade" by Professor Lewis in his book *Overhead Costs*.

Almost ten years after Lord Woolton gave his paper, this Society was presented with a paper entitled " The Analysis of Costs of Retail Distribution " by Professor Plant and Mr. Fowler of the Department of Business Administration in the London School of Economics.

Drawing on the statistics compiled by the Retail Distributors Association, their paper, which ran to fifty-seven pages and contained fifteen tables of statistics, threw a beam of light on a subject about which politicians and others, who should have known better, were and still are, wont to speak freely with a maximum of prejudice and a minimum of fact. They explained in precise and careful detail the field covered and the system for obtaining the data. They stated the problems of definition involved, the representativeness of the sample and

the significance of the data presented. Their main analysis covered Gross and Net Margins of Profit with the five broad expense classifications: Administration, Occupancy, Merchandising, Publicity and Despatch, and they gave also an analysis of changes in rate of sales and stock turns. Perhaps their most important contribution was the dynamic analysis which they gave, showing comparisons of costs of a constant sample of contributing firms over a period of seven years from 1931 to 1938.

Lord Woolton and Professor Plant were pioneers. I am no more than a very humble follower in the trail which they have blazed. All I shall attempt in this paper, alas with neither the great breadth of experience of retail trade of Lord Woolton, nor the power of economic and statistical analysis of Professor Plant, is to carry on their study, as closely as possible, from 1938 through the war and post-war years up to 1949.

Whilst I do not think it will be necessary for me to go into such detail of definition as did Professor Plant, since some of my audience will be familiar with it, I shall give a brief summary of the scope of the analysis.

In each of the years 1931 to 1938, slightly more than one hundred stores collaborated in the enquiry. Their total sales averaged over £50,000,000 each year. They employed a staff of about 45,000 people and had an annual wage bill of about £6,500,000.

In 1949, when the Retail Distributors Association resumed its full analysis on the same basis as in the pre-war enquiry, 162 stores submitted their figures with total sales of £118,038,327. These 162 stores employed 48,468 people.

The Retail Distributors Association was, unfortunately, compelled by war-time conditions to suspend its collection of statistics on the pre-war scale, but we have available for the trade years 1941 to 1946 the results of enquiries on simpler lines carried out by the Association in collaboration with certain other retail organisations, and covering drapers and men's outfitters as well as department stores; from these the

figures relating to businesses with total annual sales exceeding £50,000 have been selected as most nearly corresponding to department stores separately.

Most of the stores deal in the six main groups of merchandise :—Piece Goods, Women's Wear, Men's and Boys' Wear, Boots and Shoes, Furnishings and Hardware.

In 1949, twenty-three of the 162 stores recorded sales of food departments. Foodstuffs have a higher rate of stockturn, a lower gross margin and lower expense rate expressed as a percentage of sales than non-food merchandise, and these facts must be borne in mind, although it may be said that the influence of these food departments is not, in fact, very considerable on the figures over the trade as a whole. For example, in 1949, the gross margin for all sizes and classes of trade combined was 22·54 per cent., including food departments, and 22·69 per cent., if these were excluded.

For purposes of analysis and to improve comparability, the stores have been grouped in various ways :—

(1). By Class—as between those dealing in medium to higher price merchandise and low to medium. This classification is left to the judgment of each contributing store as it has been found impossible to provide any precise criterion for it, although the stores find little difficulty in deciding to which category they belong.

(2). By the Size of each store's total sales as follows :—

Size 1 up to £100,000.
,, 2 from £100,001 to £250,000.
,, 3 from £250,001 to £500,000.
,, 4 from £500,001 to £1,000,000.
,, 5 over £1,000,000.

(3) By Geographical Area

London—comprising Central, West End and Suburban.

North—Comprising Scotland, North East, North West, Midlands and South Wales.

South—comprising the rest of England.

Table I sets out particulars of the sample for 1949.

Cash and Credit Trade

It may be expected that comparability may be impaired by differences in method of doing business, in particular whether the business is conducted on a cash or credit basis. Professor Plant states in his paper that " the separation of stores in the analysis on the basis of the proportion of cash to total trade, will serve the double purpose of enabling like and like to be compared, and at the same time, discovering the influence of credit upon operating results ".

In 1938 cash and credit sales were about equally divided.

In the 1949 enquiry, cash sales represented about 75 per cent of total sales for all contributing stores together. The figure was about 64 per cent for all high-medium stores and 86 per cent for all medium-low stores. A special analysis which was made of the Accountancy expense does not, however, indicate that the influence of credit trade upon operating results is of such a magnitude as to outweigh other influences unconnected with the extent of credit trade. Bad Debts only amounted to 0·03 per cent. The highest rate was in London amongst the larger high-medium stores where it reached 0·08 per cent of the total sales—cash and credit—or about 0·22 per cent of the credit trade only. On a total turnover of £1 million, Bad Debts would amount to some £800.

Operating Expenses

These are analysed under five functional divisions :— Administration, Occupancy, Merchandising, Publicity and Despatch. Each division consists of several sections. There are in all fifty-two separate sections. These sections, divided between Personal and Impersonal items, are all precisely defined, but to save space they will not be given here. There are twenty-two Personal Expense sections, comprising salaries and wages, employers National Insurance contributions, together with items akin to remuneration such as net cost of staff canteens and contributions to pension funds.

The Gross Margin plus Discounts Received together constitute what is described as Total Credit. Discounts received are cash or settlement discounts allowed by suppliers of goods

for payment within prescribed periods. It is treated as a separate item because it directly arises from financial operations rather than from departmental trading.

Trading Surplus

Finally " Total Credit " less " total expenses " produces the resultant amount " trading surplus " or net margin. Note that this differs in a number of ways from the net profit of the business as commonly defined. " Trading surplus " is struck after debiting a " rent charge " for premises owned by the business, but before debiting interest charges. It takes no account of non-trading profit or loss.

All percentage figures given in the following tables are percentages of total sales, unless otherwise stated.

Table II gives a summary of 1949 Operating Results and Table III gives a historic summary from 1938 to 1949.

I propose now to examine in some detail the operating results under the five main functional divisions for 1938 and 1949. Although the sample in the two years is not the same, some useful conclusions can be drawn. Before doing so, however, I should like to make a brief historical survey concerning the years 1938 to 1949.

Shortly after the outbreak of the war, the Price of Goods Act, 1939, was passed " providing that price-regulated goods should not be sold at higher prices than those ruling for the same or similar goods on 21st August, 1939, together with such additions as were reasonably justified by subsequent increases in the cost of production or distribution. Thus the net profit per unit in terms of money was set at the pre-war level, which might be high or low according to the type of trade conducted and the policy followed before the War, but the retailer could make allowance for the increased cost of overhead expenses spread over a lessened turnover ". (Smith Retail Distribution, page 163). This Act soon proved unworkable although it still remains on the Statute Book.

The introduction of the Utility scheme with the fixing of maximum prices or margins or both for manufacturer,

wholesaler and retailer, took place in 1941. Meanwhile supplies began to diminish considerably although existing stocks served as a cushion for some time. Between January, 1940, and November, 1941, an investigation carried out by the National Institute of Economic and Social Research in Leeds and Glasgow, established " that some 19 per cent of the shops in Leeds had closed, twice as many of the shops being of the ' one-window ' type as of the more extensive businesses. In Glasgow, the rate of decline appeared to be a little faster. Allowing for retirement due to ill-health and old age, and for one-man shops closing on the death of the owner, some half of the closures were directly attributed to the War " (Smith Retail Distribution, page 165). But the mortality was high, too, amongst the larger stores in London, the Midlands and the South West as a result of air-raids and Government requisitioning, and by March, 1942, department stores had lost some 23 per cent of floor space and 33 per cent of staff. The total number of persons engaged in distribution fell from 2,160,400 in June, 1939, to 1,483,300 in 1944. By 1949, at 2,101,800 it was just below the pre-war figure.

Big changes took place both in the price level and in the quantity of goods handled. The first column of *Table III* sets out an index series, representing the trend of department store sales during this period. On the whole, department stores proved more elastic in their buying than the multiple and co-operative organisations. Where supplies fell off in some departments, they were quick to substitute other goods and to open or expand other departments. But the quantity of goods handled dropped sharply ; by 1942-43, prices had risen to nearly double their 1938 level and the quantity of goods sold fell to less than 60 per cent of 1938. By 1949 prices had risen since 1938 nearly to the same extent as sales, and the quantity of goods sold by department stores in 1949 was slightly in excess of 1938.

The maximum percentage margins permitted by the Board of Trade, were continuously reduced, as is reflected in the continuous decline shown in the Gross margin column of

the Table. The *Gross Margin*, which stood at 28·87 in 1938, had fallen to 22·54 by 1949.

Discounts Received, represented as a percentage of sales, fell very substantially, partly because such discount is not allowed off the Purchase Tax element in the cost of the goods, but the major factor accounting for the fall in discounts received was the actual reduction in the rate allowed by supplying firms. In 1939, the usual discounts allowed by the Manchester Warehouses were $3\frac{3}{4}$ per cent for payment by the 10th of the month following delivery, and $2\frac{1}{2}$ per cent for settlement by the second 10th. The war-time sellers market enabled them to reduce their terms to $2\frac{1}{2}$ per cent monthly and nett thereafter.

Total Expenses as a percentage of sales fell from 25·11 in 1938 to 17·99 in 1949. The bigger proportion of the fall was in the Impersonal expenses which fell from 11·20 to 6·46 whereas Personal expenses fell from 13·91 to 11·53 only. In 1938, expenses were fairly evenly divided as between personal and impersonal items. By 1949 the ratio between them had become nearly two to one.

The Trading Surplus, which rose during the war years to a peak of 9·45 in 1945, largely through the cutting down of services, was back in 1949 at 6·02 to almost the same level as in 1938, when it stood at 6·11.

We can now examine in greater detail the changes in the various expense divisions.

Administration

This is divided into four sections :—

Executive, Accountancy, General and Staff.

The total cost of administration in 1949 for all stores was 5·11 per cent and was somewhat greater for high-medium (5·32) than for medium-low stores (4·92). It was highest in stores of the high-medium size three group (5·75) and lowest (4·29) in size two of the medium-low stores. There is no clear upward or downward trend of total Administration expense as size of store increases.

The following table shows the Administration expense figures expressed as a percentage of total sales for 1938 and 1949.

	Personal		Impersonal	
	1938	1949	1938	1949
Executive	1·28	1·20	—	—
Accountancy	1·14	1·00	·27	0·12
General	·72	0·73	1·35	1·38
Staff	·27	0·54	·05	0·13
	3·39	3·47	1·67	1·63
Total Adminstration :	5·06	5·11		

It will be noticed that the total percentage cost of Administration—Personal and Impersonal items together—was almost the same for 1949 (5·11) as for 1938 (5·06).

The most important factor in the big increases in Staff Personal items is the cost of *Pensions* schemes which the larger stores have introduced since 1938. The cost of pensions expressed *as a percentage of total remuneration* averages 3·9 per cent for all stores—group averages ranging from 5·5 per cent for size five high-medium stores down to 1·2 per cent for size two medium-low stores.

The drop in Accountancy Impersonal expenses is mainly on account of fewer *Bad Debts*, reduced from 0·13 per cent in 1938 to 0·03 per cent in 1949. Included in these Impersonal expenses are *Charity* Subscriptions, the typical percentage cost being 0·02 per cent, but higher figures are found for both the smallest and the largest medium-low stores. A total annual subscription to Charity of say £200 by firms with a turnover of £1 million does not indicate great generosity and might call for the attention of the appeal organisers of the trade charities.

OCCUPANCY

This comprises the following Impersonal Items :—

Buildings—Rents and Rates

General —including, Heat, Light and Power; Maintenance and Repairs, Renewals and Depreciation, Cleaning Materials and Miscellaneous.

Personal Items cover the remuneration of staff engaged in connection with the maintenance and services of the building occupied. The figure used for the rent charge is the net Schedule A assessment whether the building is owned or leased. It is recognised that this is an arbitrary figure and its similarity to a true rent charge has become even less in recent years owing to the now obsolete basis of Schedule A assessment. Contributors to the 1949 analysis were, therefore, asked to quote for comparison an amount equal to 4 per cent of the insured value of their buildings. It was found that the "insured value" figures exceeded the Schedule A figures two, three or four times for certain groups, and averaged more than half as much again over the whole sample. The "insured value" figures relate to the buildings only, excluding the land value, so that the difference between the two sets of figures is greater still. When the new Central Valuation Office gets to work on re-assessing, there are likely to be some big increases.

In 1949, the total occupancy cost was 3·94. It was highest 4·51 for the larger South of England stores of the high-medium class, and lowest—2·96—in stores of the same size and area in the medium-low class. In the North, the smaller size stores of the same class had a percentage cost of 3·13, compared with 3·89 for the larger stores in the same class and area, whereas in the high-medium class, the smaller size stores had a higher cost—4·25—than the larger stores—3·99.

Occupancy Expenses for 1938 compared with 1949.

(Personal and Impersonal items combined).

	1938	1949
Rent	2·34	·93
Rates	1·18	·65
Heat, Light, Power, Water ...	·91	·49
Maintenance and Repairs ...	·73	1·03
Renewals and Depreciation ...	·70	·33
Cleaning	·30	·35
Miscellaneous	·09	·17
	6·28	3·94

Occupancy is the main fixed charge in retail expenses, and as one would expect during a period of inflation, its percentage cost fell very considerably from 1938 to 1949. The rent charge alone, based as it is, on a pre-war valuation of pre-war buildings, fell from 2·34 to 0·93. The fall in the rent charge is in almost the same ratio as the rise in total money sales over the same period. Rates, too, although now two-thirds of the rent charge, as against one-half pre-war, are now little over half the pre-war figure, expressed as a percentage of sales. The same is true of heat, light, power and water.

The percentage cost of maintenance and repairs is now substantially higher than pre-war. There were wide variations for this cost in 1949, the several group figures ranging from 0·43 per cent to 1·56 per cent. Pre-war, this cost was fairly evenly spread between store and store. The present variations are, no doubt, due to particular stores catching up on arrears of repairs of the war and immediate post-war period.

Merchandising

Under this heading is included the remuneration of all those engaged in the prime function of retailing—buying and selling. In 1949, the total Merchandising Expense percentage was 6·81, compared with 8·45 in 1938. The cost of buying and selling was still the most important and largest expense

of all the expense divisions and in fact as a proportion of total expenses was greater in 1949 than in 1938.

The all-stores Merchandising percentage expense for 1949 compared with that for 1938 is shown on Table VI—page 171.

I think one can, without much doubt, ascribe the rise in the cost of receiving and marking stock to the many and constantly changing Board of Trade regulations.

Professor Plant drew special attention to " the extent to which low Buying Expenses are the privilege of the larger stores ". Taking a separate analysis of four size groups he showed that " a large majority of the stores with sales in excess of £500,000, certainly more than three-quarters of them (the upper quartile being 2·01 per cent), recorded Buying Expenses lower than those obtained by more than three-quarters of the stores in the other three size-groups (lower quartiles 2·55, 2·18 and 2·22 respectively).

In 1938, the average Buying Expense percentage for the largest size stores in the high-medium class was little more than half—1·86—that of the smallest size group 3·59. In the low-medium class we find similarly that the larger the store, the smaller the buying expense.

In 1949, the advantage of the larger stores was not nearly so great. Indeed, in the high-medium class, the smallest size stores have actually the lowest buying expense—1·78—compared with 1·89 for the largest size stores. The big stores in the medium-low class, however, still retain their advantage, the percentage cost being only 1·07, compared with 1·87 for the smallest size in this class.

Unfortunately, comparable figures are not available for the variety chains or for the multiple stores. It is believed, however, that their lower costs are in a large measure due to their smaller buying expenses.

Professor MacNair, speaking of American Chains, compared with the department stores, says they have ' a larger sales volume per buying decision'. This is not, of

course, due simply to their bulk buying facilities, but to the fact that compared with the usual store department they buy and stock a fewer number of items.

The chain store and the department store have each their place in the pattern of retail distribution, and even groups of financially integrated department stores have something to learn in this respect from the chain stores.

Turning to the Selling expense, we find that in 1938 the percentage cost in the smallest size group of the high-medium stores was 7·08, compared with 6·30 for the largest size, and 7·45 for the smallest size group, compared with 6·51 for the largest size in the low-medium class.

In 1949, the corresponding figures were :—

	High-Medium	*Medium-Low*
Under £100,000 ...	4·15	6·60
Over £1,000,000 ...	5·14	5·28

It will be noticed that the selling expense in 1949 tended to be greater in the medium-low trade than in the high-medium trade, whereas the buying expense tended to be greater in the high-medium trade.

STAFF

It would perhaps be interesting at this point to give some figures concerning the staff cost per employee, the number and value of transactions carried out for each employee and the average value of a transaction. These figures are arrived at by taking the total number of employees engaged about the business of the store, not simply the number of sales assistants.

There are advantages in specialisation in retail trade as in industry generally, but the efficacy of freeing the sales assistants from certain operations can only be fairly judged by reference to the effect on the total staff engaged on all operations. Much of an assistant's time is spent waiting to serve and although she may during the waiting time be put to work for example on the marking and ticketing of stock, which she does less efficiently than special staff working with a machine, it

may still on balance be worth keeping her on this job rather than have her stand, or rather I hope sit, idly waiting for the next customer.

Staff Cost per Employee

In 1949 was approximately £281. There was no great variation in this figure as between all high-medium and all medium-low stores. In London, however, the staff cost per employee was £312, compared with £268 in the North. The Joint Industrial Council wage scales provide for higher rates in London.

Sales per Employee

In the high-medium stores, sales for each employee on the average amounted to £2,371, whilst for all medium-low stores they totalled £2,501. There was no clear trend for sales per employee to vary according to the size of store, although there was some indication that sales per employee were higher in the largest size group of the medium-low class—£2,573—than in the smallest size—£2,091. Sales per employee were distinctly higher in London than in the North or South.

Average Value of Transaction was 10s. 3d. for all stores ; 15s. 9d. for the high-medium and 7s. 4d. for the medium-low. The average number of transactions per employee was 2,992 for the stores doing a high-medium trade and considerably twice as great—6,787—for those in the medium-low trade. The larger stores in the medium-low trade in the North of England had just under 8,000 transactions per employee. If this figure were excluded, there would be little difference between high-medium and low-medium as regards sales per employee, and average transactions per employee in medium-low trade would be only about 40 per cent higher than those for high-medium stores.

The Retail Distributors Association report for 1938 does not give comparable figures, but with some reserve the following figures may be taken as indicating broadly the changes which have taken place.

	1938	1949
Average Cost per employee	£150	£281
Sales per employee	£1077	£2435
Average Transaction All High-Medium	10/4	15/9
London High-Medium	12/9	19/6
All Medium-Low	3/7	7/4
North Medium-Low	3/-	6/3
Transactions per employee High-Medium ...	2000	2992
Medium-Low	6000	6787

PUBLICITY

The publicity expense comprises General Advertising—Press, Direct Mail, and other forms of advertising such as street posters and Display.

The expenses of publicity are probably those most noticed by the public, and most subject to attack by critics. Yet they are almost the smallest item in store expense. In 1949, the Publicity Expense total, including the personal and impersonal costs, for all stores, was only slightly more than 1 per cent of total sales.

Stores in the high-medium class had a total publicity expense—1·18—slightly larger than those in medium-low trade—1·10. The cost tends to rise as the size of store increases.

The percentage cost of press advertising (impersonal items only) was 0·5 per cent for all medium-low stores and nearly 0·6 per cent for all high-medium stores. In each case it rises as size of store increases. There are considerable variations in expenditure on press advertising. The large London high-medium stores spent ·77 per cent; the smaller stores 0·2 per cent or less. Professor Plant, analysing the costs for 1937, commented on the wide differences in Press Advertising expenditure which existed then.

The cost of Display (personal and impersonal combined) including all window and interior displays, averaged ·38 per cent for both high-medium and medium-low stores. It tends to exceed this figure among small stores and to fall below it among large stores.

Comparing the cost of publicity for all stores in 1949 with the corresponding figures for 1938, we find the position as follows :—

	1938	1949
Advertising		
Press	1·31	·54
Direct Mail	·76	·08
Others	·23	·09
Salaries etc.	·14	·05
Display	·47	·38
	2·86	1·14

The paper shortage, limiting the size of newspapers, forced on the stores a reduction in press advertising, so that despite the big increase in advertising rates, the cost of their press advertising expressed as a percentage of sales has fallen considerably. Expressing a personal view, I am inclined to think that this limitation has not been altogether a bad thing. We have had to learn to say what we want to say with as few words as possible, and to see that we get the maximum value out of each inch of space used. Certainly when I compare the appearance of our newspapers with the American press, I can but hope that we shall never find ourselves reaching their levels of extravagance. Even more striking than the reduction in press advertising is the virtual elimination of direct mail advertising. In pre-war days, the large London stores spent 2½ per cent on direct mail, about as much as on press advertising. In 1949, their expenditure at 0·2 per cent was less than one-tenth of the pre-war expenditure. How much this falling-off in direct-mail expenditure was due to temporary shortages and

irregularity of supplies and how much a result of long-term changes in customers shopping habits, it is not possible yet to say.

Despatch Expense

The Despatch Expense division mainly comprises the additional costs involved where customers purchases are delivered to their homes. But it also includes the cost of packings and wrappings which relates to practically all customers purchases whether delivered or not. This latter cost is ·24 per cent for all stores, being slightly larger for high-medium and slightly smaller for medium-low stores. The larger stores tend to spend more on their packings and wrappings, the large London stores averaging ·35 per cent.

The actual delivery services total ·73 per cent for all stores, ·83 per cent for high-medium and ·64 per cent for medium-low stores. Again, the large London stores have, as would be expected, the highest group figure, of rather less than 1 per cent.

If the delivery service cost were expressed not as a percentage of total sales despatched and taken over the counter, but as a percentage only of sales despatched, the cost would appear significantly greater. It was, no doubt, this fact which led Lord Woolton in his 1929 paper to tell a story of how when he overheard a woman in one of his stores give an order for a dozen clothes pegs, value 4d., and ask for them to be sent to St. Helens, he was constrained to say to her, " Would you mind if I give you half-a-crown and ask you to go and buy the clothes pegs somewhere else ".

The following table compares 1949 despatch expenses with their corresponding 1938 level, in each case expressed as percentages of total sales :

	1938	1949
PERSONAL :		
Despatch Room, Packers, Drivers etc.	1·05	0·37
IMPERSONAL :		
Parcel Post, Van Supplies, Hire of Vehicles etc.	0·98	0·35
	2·02	0·73
Packings and Wrappings ...	0·43	0·24
GRAND TOTAL	2·45	0·97

The percentage cost of packings and wrappings was little more than half its pre-war figure. During the war, shops were for a period prohibited from using paper for wrappings. The effect of this prohibition continued even after paper supplies became more plentiful, and by 1949, we had not yet achieved our pre-war service in this respect. It will be noticed also that the percentage cost of delivery services was little more than one-third of its pre-war level. To some extent this will be related to the reduction in direct-mail advertising.

STOCK SHORTAGES—THE COST OF DISHONESTY

There is one element in the costs of distribution which is rarely referred to and on which there are few published figures. It is a cost about which we, in England at least, seem slightly ashamed, although there is less reticence on the subject in the United States. It is a cost no less real than the cost of advertising, a cost over which the retailer has little power of control, and for which the public and the shopkeeper most surely pay, to the profit of a minute fraction of the population. I mean the cost of dishonesty—dishonesty on the part of the public in front of the counter and of the staff behind it.

The gross margins which are given in this paper, the gross margins of which we commonly speak, are the *realised* gross margins, after the cost of dishonesty and other forms of stock

losses, due to soiling of goods, breakages and the like, have been met. The full difference between the cost of an article and the price at which the retailer hopes to sell it, is called the mark-on, and in an ideal world the mark-on and the realised gross margins would be the same. But they most certainly are not the same in this very imperfect world of ours.

I have said that there are few published figures, but from the figures which I have studied of the American stores, from the figures which we have compiled within our own organisation and from enquires which I have made from other English stores, it is known that mark-downs for faulty buying, misjudgment of public taste, soiling and the like, and the cost of dishonesty itself, about which I am most concerned here, amount to a very considerable figure.

Mark-downs are the known element. Each reduction in price from the original price fixed and the reason for the reduction is recorded so that management can investigate the causes and take steps to eliminate or at least reduce them. What is left to be discovered by physical stocktaking at the end of the financial year, is the Great Unknown, the Stock Shortage, the cost of dishonesty.

To me personally, this cost causes more concern than all the other costs put together. It is so incalculable, it varies so greatly from department to department and from shop to shop. In U.S.A., the national averages of stock shortages have continued at approximately one per cent of sales over the course of the last fifteen years, with a slightly rising tendency over the last five, from 1944 to 1949. In 1950, the national average fell again to just below 1 per cent. The losses are, as one would expect, greatest in the larger stores where they reached 1·5 per cent in 1949.

Mark-on and Mark-down are much higher than in England, where, particularly since 1939 until the last few months, mark-downs have been kept to a low level, but I believe that the stock shortage rate is at least as high as in America.

During the period of clothes rationing, retailers were given an allowance of coupons of 2 per cent to cover losses of stock through damage, shoplifting and pilfering by staff. Without this allowance, the retailer would soon have found his coupon capital so depleted that he could not have continued to give service to his customers. The 2 per cent allowance, being standard, naturally gave a greater advantage to those retailers with a low rate of stock shortage than to those who had suffered from the onslaught of the locusts. In our own organisation we have had stock losses in branches and departments, ranging almost from nil to 8 per cent of the turnover. From my limited knowledge and enquiries I should say that in fact in England to-day the cost of dishonesty is nearer 2 per cent of sales than 1 per cent.

Professor Plant made no mention of stock shortages in his paper of 1938, although, of course, stock shortages existed then as now, even if to a lesser extent. Advertising however, usually receives special attention when distributive costs are being considered, and he points out the wide differences which obtain in the Press Advertising of department stores. While one quarter, he states, spent less than 0·51 per cent of their sales in 1936-37, one quarter spent more than 1·60 per cent. The differences in stock shortages are certainly much greater than that.

I think it is clear from the information which is available, meagre though it is, that what I have called the cost of dishonesty, is an important element in the costs of retail distribution. Whatever can be done to reduce it, is an economic gain to all but a fraction of the community and a moral gain to the few dishonest ones amongst us.

The Cost of Holding Stock

The cost of holding stock is not simply the interest charge on the capital invested. Loss of value of the stock through soiling and damage, drastic reductions in price necessitated by changes of fashion, are also part of the cost of holding stock. The more frequently the stock can be turned over, the lower

the cost of holding stock. The number of times the stock is replaced in a year, referred to as the rate of stock-turn, is arrived at by dividing the average monthly stock value into the total sales amount. Before the war, the R.D.A. worked out stock-turn rates by dividing average stock at *cost* into sales at *selling* price value, but the Association has now adopted the basis of dividing stocks at *selling* into sales at *selling* values. This method gives a lower rate but it is more realistic.

Rates of stock-turn vary considerably from department to department, and as one would expect, tend to be highest in fashion departments. It is, I think, commonly believed that a department with a low stock-turn rate has a high gross margin to compensate. Sir Geoffrey Heyworth in his address this year to the general meeting of Lever Brothers said : " A margin of 34 per cent on a drug of which one package is sold, gives the same gross return as a margin of 17 per cent on a grocery item of the same price of which two packages are sold in the same time ". He is, of course, quite right so far, but he goes on to say: " that is why certain articles have retail mark-ups as high as 30 or 40 per cent ". But this statement is not altogether borne out by the rates of stock-turn and gross margins for department stores. In 1949, the Food and Grocery departments had a stock-turn of 10·9 and a gross margin of 19·2 per cent whereas Toilet and Cosmetic Goods had a stock-turn of 5·5 and a gross margin 18·8 per cent. The inclusion of Purchase Tax has, of course, an important influence on these figures, but the gap between initial mark-up and realised gross margin, which is nearly always reduced *pari passu* with an increase in the rate of stock-turn, is no less important. All non-food departments had a stock-turn of 5·6 and gross margin of 22·7 per cent. Millinery, which—as one would expect— at 11·2 has the highest stock-turn of all the non-food departments, had the highest gross margin—27·4 per cent.

As a general rule, stores in the high-medium trade tend to have a lower stock-turn rate than medium-low stores, and in each case the average stock-turn rate tends to rise with the size of department.

Often retailers disperse their stock over too many lines, and although this gives extensive consumer choice, it is probable that this is done at too high a cost. Filene's principles of model stock which he drew up thirty years ago, have still to gain acceptance by or even to be known to many retailers. It is undoubtedly largely through the logical application of these principles that the chains of the Marks & Spencer type have gained their great success. A comparison of rates of stock-turn with the single unit shop, the multiples, co-operatives and department stores would, I believe, reveal some illuminating results.

During the War, when it was said that the shops could sell anything, stock-turn rates rose to a very high figure and they continued high for some years after the war, whilst demand was still great and supplies small. Even then we were probably doing a high proportion of our trade on a fraction of our stocks. In the last year or two, stock-turn rates have begun to fall and they will probably fall still further this year.

A high rate of stock-turn usually goes with a high net profit, but this is not always the case as Professor Plant demonstrated in his paper. His conclusion was that the rate of stock-turn can never be used with confidence as a measure of general operating efficiency. Nevertheless, my own experience has been that whilst many other factors must be taken into account, a comparison of changes in the rate of stock-turn does give a good simple and quick guide to the fortunes of a business. As Mr. Leonard M. Harris, managing director of Browns of Chester, said recently : " I have examined the affairs of many retailers and have seen people go bankrupt through having the wrong stock or too much stock but seldom, if ever, through having too little ".

Does Retailing Cost too Much?

The question is often asked: Does retailing cost too much ? The enquirer seldom stays for an answer, but simply asserts that it does.

The question is asked in America too. Professor McNair of the Harvard Graduate School of Business Administration

found it necessary to refer to the question in an address which he gave last year on the occasion of his appointment to the Filene Professorship of Retailing. He spoke of the suspicion that exists in regard to retailing profits and the widespread lack of understanding of retail costs.

Sir Geoffrey Heyworth at the annual general meeting of Lever Brothers devoted his address to the subject of distribution. " The idea," he said, " is fairly widespread that costs of distribution are of an entirely different character from costs of production ; that they are less justifiable than the latter and that they are probably too high ".

Professor McNair himself ascribes the suspicion of marketing efforts and marketing costs at least in part to the over-emphasis by economists on static equilibrium concepts. " It has taken and it is taking ", he says, " economists a long time to recognise that the dynamic aspects of the economy are the significant ones, that change and progress are the keynotes, and that attention has to be given to the means by which change and progress are accomplished. When we speak of progress, it is natural to think primarily of technological developments. But technological progress alone falls short of explaining changes in standards of living. This is where marketing comes in ".

The odd ideas and strange suspicions which exist about retailing, have their roots deep in the past and indeed in the not-so-recent past when the shopkeeper and middleman were considered socially inferior beings. We may all admire the craftmanship of the Cotswold cabinetmaker more than we do the sales technique of the West End furniture salesman, but that is really beside the point. At the stage which our civilisation has reached, if we are to make any comparison at all, it should be with the operative in a mass-production furniture factory. Then we would realise that the furniture salesman is performing no less necessary a function than the lumberjack or the operative in the process of transforming a tree from some distant land into a suite of furniture in our home.

Everyone has been inside a shop, but there must be thousands of people who have never been inside a factory. No doubt, familiarity has bred contempt and a readiness to make the shopkeeper the scapegoat for inefficiency which may, in fact, have arisen in the factory.

Instead of asking the question: Does retailing cost too much—and then leaving the one to whom the question is put to ask in turn—Too much in relation to what? To what retailing renders in return? To what production costs? To what retailing cost fifty years ago? To what it costs in America today? We should rather ask: How can retailing be made more efficient than it is now?

In this paper I have not attempted to answer any of these questions. I have restricted myself to giving some figures analysing the costs of distribution of a group of department stores in 1949, and comparing their costs with 1938. These figures are certainly of more value and interest to the store manager than they can possibly be to the economist. To the store manager such statistics and the much more detailed ones contained in the reports of the Retail Distributors Association provide a standard by which he can measure the performance of his own store, and a stimulus to great efficiency in management and organisation.

May I at this point acknowledge with gratitude the help of the Retailers Distributors Association and confess that without the freedom to draw upon their reports this paper could not have been written.

If similar figures were available for the Co-operative Societies, for the multiples and the unit shops and the wholesale organisations, the economist would have a complete picture of the costs of distribution, from which he would be able to make some valuable comparisons and to draw some interesting conclusions which would, I am certain, be to the benefit of the consumer and to all engaged in distribution.

The census of distribution will go some way to providing this information but much will still be lacking. Other trade associations besides the R.D.A. have, I believe, collected statistics of costs of distribution from their members. I am certain that nothing but good would come from the publication of these statistics. If this task were undertaken by an academic body such as our own University Department of Economics, it may be that these organisations would follow the example of the R.D.A. and allow access to their statistics.

I said that I had not attempted to answer the question: "Does retailing cost too much?", and yet, I cannot, in conclusion, refrain from reminding you of the comparative figures for 1938 and 1949, which I gave earlier in this paper, and even at this late point to present you with similar figures for the United States.

	U.K. 1938	U.S.A. 1939	U.K. 1949	U.S.A. 1949
Gross Margin including discounts ...	31·2	36·9	24·0	35·2
Total wages and salaries	13·9	17·8	11·5	17·9
Total Expenses	25·1	35·4	18·0	32·5

I should point out that the U.S.A. figures for Expenses include a 'notional' interest on certain capital items, which would probably account for 1% or 2% of the total expense figures quoted.

To what extent the lower costs of distribution for department stores in this country in 1949 compared with 1938 and compared with the U.S.A. are due to greater efficiency and how much is simply due to less service and diminished consumer choice, I cannot say. But one can at least say—Retailing (in department stores) costs less now than it did before the War, and it costs less in England than it does in America.

Manchester. LEONARD COHEN.

APPENDIX

TABLE I

NUMBER OF STORES AND TOTAL SALES GROUPED BY CLASS OF TRADE, SIZE AND AREA.

	No.	1949 Net Sales
All Stores	162	118,038,327
London	26	35,389,736
North	58	56,515,698
South	78	26,132,893
Class of Trade High-Medium	100	57,998,428
Medium-Low	62	60,039,899

Size Group	High-Medium		Medium-Low	
	No. of Stores	Net Sales	No. of Stores	Net Sales
		£		£
1	15	1,034,040	10	623,038
2	20	3,356,072	13	2,163,281
3	27	9,541,507	12	4,924,765
4	22	15,926,621	11	7,792,313
5	16	28,140,188	16	45,166,502

TABLE II

SUMMARY OF 1949 OPERATING RESULTS.

(based on aggregate figures for each group of stores distinguished)

A.—PERCENTAGES OF TOTAL SALES OF GROUP

Item	Stores of all sizes			High-medium stores of size group :					Medium-low stores of size group :				
	Total	High med.	Med. low	1	2	3	4	5	1	2	3	4	5
Expense divisions :													
Administration	5·11	5·32	4·92	5·48	5·38	5·75	5·15	5·24	5·52	4·29	4·82	5·04	4·93
Occupancy	3·94	4·06	3·83	3·78	3·66	4·33	4·30	3·89	3·98	4·00	3·70	3·08	3·96
Merchandising	6·81	7·04	6·60	5·93	7·19	7·31	6·93	7·03	8·47	7·48	7·50	7·17	6·35
Publicity	1·14	1·18	1·10	0·51	0·97	0·89	1·16	1·35	0·89	1·00	0·93	0·70	1·19
Despatch	0·97	1·10	0·86	0·62	0·99	1·00	1·15	1·13	0·62	0·65	0·90	0·88	0·86
Expenses (all divisions) :													
Personal	11·53	12·08	11·00	10·69	12·06	12·50	11·86	12·11	13·41	11·30	12·00	11·91	10·70
Impersonal	6·46	6·61	6·31	5·61	6·12	6·78	6·84	6·52	6·06	6·12	5·85	4·95	6·59
Total expenses	17·99	18·69	17·31	16·30	18·19	19·29	18·70	18·63	19·47	17·42	17·85	16·87	17·30
Gross margin	22·54	22·52	22·55	21·49	21·61	21·84	23·04	22·60	21·11	20·85	22·11	22·13	22·76
Discounts received	1·47	1·44	1·50	1·50	1·50	1·51	1·45	1·41	1·52	1·63	1·56	1·49	1·49
Total credit	24·01	23·96	24·05	22·99	23·11	23·35	24·49	24·01	22·63	22·48	23·67	23·62	24·25
Trading surplus	6·02	5·27	6·74	6·68	4·92	4·07	5·79	5·38	3·16	5·06	5·82	6·76	6·96

TABLE II—continued.

B.—PERCENTAGES OF TOTAL EXPENSES OF GROUP

Item	Stores of all sizes			High–medium stores of size group :					Medium-low stores of size group :				
	Total	High med.	Med. low	1	2	3	4	5	1	2	3	4	5
Expense divisions :													
Administration	28	28	28	34	30	30	28	28	28	25	27	30	28
Occupancy	22	22	22	23	20	22	23	21	20	23	21	18	23
Merchandising	38	38	38	36	40	38	37	38	44	43	42	43	37
Publicity	6	6	6	3	5	5	6	7	5	6	5	4	7
Despatch	5	6	5	4	5	5	6	6	3	4	5	5	5
Expenses (all divisions) :													
Personal	64	65	64	66	66	65	63	65	69	65	67	71	62
Impersonal	36	35	36	34	34	35	37	35	31	35	33	29	38
Total Expenses	100	100	100	100	100	100	100	100	100	100	100	100	100

TABLE II—continued.

C.—PERCENTAGES OF TOTAL SALES OF GROUP—DISSECTION BY AREAS

Item	High-medium stores						Medium-low stores					
	Sizes 1-3			Sizes 4-5			Sizes 1-3			Sizes 4-5		
	North	London	South	North	London	South	North	London	South	North	London	South
Expense divisions :												
Administration	5·68	3·88	5·68	4·96	5·45	5·05	4·52	3·82	5·01	5·55	4·20	3·59
Occupancy	4·25	4·49	4·05	3·99	3·95	4·51	3·13	3·74	4·18	3·89	4·24	2·96
Merchandising	6·60	6·62	7·50	6·78	7·02	7·53	6·81	7·69	7·93	6·39	6·46	6·83
Publicity	0·92	0·45	0·87	1·04	1·57	0·88	1·03	0·94	0·91	1·10	1·53	0·56
Despatch	0·90	0·52	1·02	1·01	1·28	0·97	0·75	0·84	0·82	0·73	1·25	0·78
Expenses (all divisions) :												
Personal	11·88	10·52	12·51	11·67	12·26	12·15	10·89	11·46	12·52	10·78	11·36	10·53
Impersonal	6·47	5·43	6·61	6·12	7·01	6·79	5·35	5·56	6·33	6·88	6·31	4·19
Total expenses	18·36	15·95	19·12	17·79	19·27	18·95	16·24	17·02	18·84	17·65	17·66	14·72
Gross margin	21·51	21·49	21·90	22·46	22·90	23·15	21·57	20·43	21·92	22·92	22·89	21·22
Discounts received ...	1·55	1·20	1·50	1·49	1·36	1·45	1·65	1·73	1·51	1·56	1·32	1·50
Total credit	23·06	22·69	23·40	23·95	24·26	24·60	23·22	22·16	23·43	24·48	24·21	22·72
Trading surplus	4·70	6·73	4·28	6·16	5·00	5·66	6·98	5·13	4·59	6·83	6·55	8·00

TABLE III

OPERATING RESULTS, 1938 to 1949.

(Figures are percentages of total sales for the year, except those in the first column, which are index numbers of each year's total sales, based on 1938—100)

Sales Index	Year	Gross Margin	Discts. Received	Total	Trading surplus	(Expenses all divisions)			Impersonal expense details			
						Total	Personal	Impersonal	Admin.	Occupancy	Publicity	Desp'ch
100	1938	28·87†	2·35†	31·22	6·11	25·11	13·91	11·20	1·67	5·65	2·50	1·38
97	1941	28·64	1·70	30·34	6·24	24·10	12·97	11·13	*	5·67	*	*
105	1942	28·39	1·59	29·98	8·49	21·49	12·42	9·07	2·69	4·93	0·66	0·80
104	1943	27·80	1·48	29·27	8·34	20·93	12·64	8·29	1·95	4·96	0·74	0·64
113	1944	27·02	1·42	28·45	8·70	19·75	12·17	7·58	1·85	4·52	0·65	0·56
140	1945	26·63	1·44	28·06	9·45	18·62	11·73	6·88	1·65	4·08	0·61	0·55
183	1946	25·42	1·60	27·02	8·70	18·32	11·42	6·90	—	—	—	—
242	1949	22·54	1·47	24·01	6·02	17·99	11·53	6·46	1·63	3·34	0·89	0·60

† Estimated. * Not available.

The following figures are taken from the Government White Paper on National Income and Expenditure for 1950.

		Money Sales Index	Quantity Index
DR	1938	100	100
	1943	91	53
	1947	172	89
	1948	196	94
	1949	216	101
	1950	231	106

TABLE IV

DETAILS OF ADMINISTRATION EXPENSE DIVISION, 1949

(Figures are percentages of total sales on aggregate results for each group of stores distinguished)

(By Size and Class)

Item	Stores of all sizes			High-Med. stores of size group					Med.-Low Stores of size group				
	Total	High-Med.	Med.-Low	1	2	3	4	5	1	2	3	4	5
Admin. Total of which:	5·11	5·32	4·92	5·48	5·38	5·75	5·15	5·24	5·52	4·29	4·82	5·04	4·93
Executive	1·20	1·05	1·35	2·05	1·38	1·21	1·16	·86	1·81	1·45	1·38	1·10	1·37
Accountancy	1·13	1·33	·93	1·09	1·28	1·63	1·19	1·32	1·85	1·34	1·37	1·26	·80
Admin. General	2·11	2·08	2·14	1·75	2·11	2·26	2·14	2·00	1·44	1·30	1·56	1·88	2·29
Staff Expenses	·67	·85	·50	·59	·61	·65	·67	1·07	·45	·20	·51	·80	·46

(By Size, Class and Area)

Item	High-Medium Stores						Medium-Low Stores					
	Sizes 1-3			Sizes 4–5			Sizes 1–3			Sizes 4–5		
	North	London	South	North	London	South	North	London	South	North	London	South
Admin Total of which:	5·68	3·88	5·68	4·96	5·45	5·05	4·52	3·82	5·01	5·55	4·20	3·59
Executive	1·45	·94	1·26	1·05	·88	1·11	1·43	1·09	1·52	1·68	·63	1·03
Accountancy	1·85	1·08	1·33	1·09	1·46	1·11	1·24	1·56	1·45	·73	1·25	·86
Admin. General	1·94	1·31	2·35	1·91	2·12	2·18	1·52	1·10	1·52	2·63	1·75	1·34
Staff Expenses	·44	·55	·75	·92	·99	·65	·33	·07	·53	·52	·57	·36

TABLE V

DETAILS OF OCCUPANCY EXPENSE DIVISION, 1949

(Figures are percentages of total sales, based on aggregate results for each group of stores distinguished)

(By Size and Class)

Item	Stores of all sizes			High-Med. Stores of Size Group					Med.-Low Stores of Size Group				
	Total	High-Med	Med.-Low	1	2	3	4	5	1	2	3	4	5
Occupancy Total of which:	3·94	4·06	3·83	3·78	3·66	4·33	4·30	3·89	3·98	4·00	3·70	3·08	3·96
Rent and Rates (Impersonal) ...	1·57	1·69	1·46	1·86	1·60	1·60	1·72	1·71	1·33	1·34	1·49	1·19	1·51
General (Impersonal)	1·76	1·80	1·73	1·65	1·71	2·28	1·99	1·55	2·12	2·35	1·82	1·49	1·72
General (Personal)	·61	·57	·64	·27	·35	·46	·60	·63	·52	·31	·39	·41	·73

(By Size, Class and Area)

Item	High–Medium Stores						Medium-Low Stores					
	Sizes 1–3			Sizes 4–5			Sizes 1–3			Sizes 4–5		
	North	London	South	North	London	South	North	London	South	North	London	South
Occupancy Total of which:	4·25	4·49	4·05	3·99	3·95	4·51	3·13	3·74	4·18	3·89	4·24	2·96
Rent and Rates (Impersonal) ...	1·45	2·82	1·67	1·68	1·88	1·17	1·33	1·27	1·51	1·35	1·92	1·19
General (Impersonal) ...	2·36	1·13	1·98	1·69	1·47	2·69	1·49	2·20	2·23	1·90	1·40	1·27
General (Personal)	·44	·54	·41	·62	·61	·66	·32	·27	·43	·63	·91	·50

TABLE VI

MERCHANDISING EXPENSE—ALL STORES

	1938	1949
Buyers' and buyers' clerks	1·76	1·32
Receiving and Marking	·19	·27
Total buying	1·98	1·62
Assistant buyers, etc.	·44	·46
Sales Assistants	5·84	4·54
Mail Order staff	1·15	·06
Total selling	6·47	5·20

TABLE VII

MERCHANDISING EXPENSE

	1938 BUYING	1949 BUYING	1938 SELLING	1949 SELLING
High Medium				
Size 1...	3·59	1·78	7·08	4·15
„ 2	2·97	2·20	6·05	4·99
„ 3	2·77	2·12	6·23	5·34
„ 4	2·15	1·95	6·32	4·95
Over £500,000	1·86	—	6·30	—
Over £1,000,000	—	1·89	—	5·14
Medium-Low				
Size 1	3·04	1·87	7·45	6·60
„ 2	2·65	2·12	6·67	5·35
„ 3	2·60	2·17	6·74	5·33
„ 4	1·94	1·87	6·34	5·30
Over £500,000	1·57	—	6·51	—
Over £1,000,000	—	1·07	—	5·28

TABLE VIII

DETAILS OF PUBLICITY EXPENSE DIVISION, 1949
(By Size Group)

Item	Stores of all sizes			High-Medium Stores of size group					Medium-Low stores of size group				
	Total	High-Med.	Med.-Low	1	2	3	4	5	1	2	3	4	5
Publicity Total of which:	1·14	1·18	1·10	·51	·97	·89	1·16	1·35	·89	1·00	·93	·70	1·19
General Advertising	·76	·80	·72	·20	·34	·41	·73	1·05	·35	·49	·44	·37	·82
Display	·38	·38	·38	·31	·63	·49	·43	·29	·54	·51	·49	·33	·37
Press (Impersonal items only) ...	·54	·59	·50	·12	·19	·25	·51	·77	·16	·22	·37	·26	·56

DETAILS OF PUBLICITY EXPENSE DIVISION.
(By Area and Size)

Item	High-Medium Stores						Medium-Low Stores					
	Sizes 1–3			Sizes 4–5			Sizes 1–3			Sizes 4–5		
	North	London	South	North	London	South	North	London	South	North	London	South
Publicity Total of which:	·92	·45	·87	1·04	1·57	·88	1·03	·94	·91	1·10	1·53	·56
General Advertising	·47	·11	·33	·63	1·32	·36	·63	·25	·40	·76	1·05	·23
Display	·45	·34	·54	·41	·25	·52	·40	·69	·51	·33	·47	·33
Press (Impersonal items only)...	·31	·11	·17	·44	·97	·24	·56	·15	·25	·52	·71	·12

TABLE IX

DETAILS OF DESPATCH EXPENSE DIVISION, 1949

(By Size and Class)

Item	Stores of all sizes			High-Medium stores of size group					Medium–Low stores of size group				
	Total	High-Med.	Med.-Low	1	2	3	4	5	1	2	3	4	5
Despatch Total	·97	1·10	·86	·62	·99	1·00	1·15	1·13	·62	·65	·90	·88	·86

(By Size, Class and Area)

Item	High-Medium Stores						Medium-Low Stores					
	Sizes 1–3			Sizes 4–5			Sizes 1–3			Sizes 4–5		
	North	London	South	North	London	South	North	London	South	North	London	South
Despatch Total...	·90	·52	1·02	1·01	1·28	·97	·75	·84	·82	·73	1·25	·78

John Koster, Anti-Bullionist

The Bullion Committee of 1810 showed some interest in the monetary transactions between England, Brazil, and Portugal,[1] and in the hybrid currency that circulated, apparently successfully,[2] in the latter country. But, being in the main concerned with phenomena which had lately occurred, they took no great account of the flow of gold from the Brazilian mines to England and Europe, *via* Lisbon, that had been so important a monetary feature of the greater part of the eighteenth century.[3] There was one man in England who could have illuminated this phase of their inquiries to better advantage than most. He was John Theodore Koster, from 1776 to 1801 resident at Lisbon, clandestinely purchasing Brazilian gold and forwarding it to England, and since 1803 a prospering Liverpool merchant. Had the Committee called him, their questions about the gold transactions and the state of the currency in Portugal would not have been met by the somewhat lame replies they in fact received. But the Committee would no doubt have been regaled by more than fact, for Koster had himself developed strong ideas on the proper mode of operating the monetary and commercial system, developed from his own observations in Portugal and confirmed by his later experience as a merchant in Liverpool.

Though he was not a profound analytical thinker, and though his contributions to the debate were coolly received, Koster is not without significance for students of the discussion that followed the suspension of 1797. The Bank Directors in fact approached the Lords Committee of 1819 with an exploratory question similar to Koster's proposal,[4] Lord Lauderdale

[1] *Report . . . from the select Committee appointed to inquire into the cause of the High Price of Bullion . . .* London, 1810, p. 9. *Minutes of Evidence*, pp. 6, 41, 47, 48, 49. *Appendix of Accounts*, pp. 11, 37, 44.

[2] *ibid., Minutes of Evidence*, pp. 46, 50, 72, 121.

[3] *ibid., Minutes of Evidence*, p. 149. *Appendix of Accounts*, pp. 29, 30, 38, 43, 44.

[4] Resolution at a Court of Directors at the Bank, 25th March, 1819. *Reports respecting the Bank of England resuming Cash Payments, by the Lords Committees.* London, 1819. Appendix, p. 314.

moved a resolution in the same vein in the Lords,[1] and Peel felt it necessary to attack the suggestion directly in the Commons.[2] Koster was intimate with Southey, and through him supplied the Lake Poets with ammunition for their attacks on the bullionists and the Ricardian school generally. Further, Koster was not without disciples in Liverpool.

He was a man of wide general culture with a bent toward experimentation in mechanical science, a romantic at heart, yet accustomed to act upon his own judgment in the market place. His pictures of the bullion transactions of Lisbon and the economy of Portugal are of some general historical interest ; and his writings on the proper principles for the English currency, though they leave unanswered certain fundamental questions, represent a redistribution of emphasis stimulating to a generation that has, perhaps uncritically, accepted the formalism of the bullionist case.

But Koster is of greater interest and significance as a person than as a theorist or a reporter. He moved about the face of Western Europe in response to the economic currents of his day, accumulating those elements of experience which finally merged themselves in a strongly-held philosophy. We are none too well provided with the kind of personal vignette which tells us something of the way in which the mind of a late eighteenth and early nineteenth century merchant was formed ; here is one who, after two commercial careers, and well advanced in years, joined issue with the "doctrinaires" of the Bullion Committee.

II.

From 1772 to 1776 Koster lived in London, receiving and marketing considerable quantities of gold bars, gold dust, and coin, sent from Lisbon.[3] He was well acquainted with the Bullion Office and the important refinery of Messrs. Cox & Company.[4] Then, following the commodity in which he dealt

[1] A. Andreades, *History of the Bank of England.* London, 1909, p. 239.
[2] *ibid.*, p. 240.
[3] John Theodore Koster, *Short Statement of the Trade in Gold Bullion . . .* 2nd Ed., Liverpool, 1811, p. 14.
[4] *ibid.*, p. 15. William Merle, of this firm described its business to the Bullion Committee. *Minutes of Evidence*, p. 240 *et seq.*

to its source in Europe, he went to Lisbon, flourished, and within half-a-dozen years became a leading member of the British colony there. In August, 1785, he was admitted as a member of the British Factory.[1] He is described on this occasion as "of Liverpool," indicating that his connections with the port were earlier than his residence on returning from Portugal. In 1794 he served as acting Consul, which would suggest that he was treated as head of the Factory. He busied himself with the affairs of the British colony, among other projects, helping to organise the new hospital. It would seem that he met Lord Somerville, sometime President of the Board of Agriculture, while at Lisbon, and shared his enthusiasm for schemes beneficial to agriculture and internal communications.[2] He was singled out both by William Hickey, who had been provided with an introduction before leaving England,[3] and by Southey,[4] on their visits. With the latter began a friendship that survived the return to England.[5] Southey commended him as the most "conversible" person in Lisbon, and the unequivocating Hickey approved his hospitality. Years later his son could encounter a merchant in the fastnesses of Brazil who had known him in the Lisbon days.[6]

As a newly arrived youngster, he had listened to the old merchants, both Portuguese and English, recalling the halcyon times toward the end of the reign of John V between 1740 and 1750, when the mines of Brazil, that neglected colony, had poured their gold at full spate into Portugal. The flow, though reduced, had continued, restoring the ravages of the

[1] I am indebted to Mrs. M. S. Jayne and Mr. A. W. Walfred, of the Lisbon Branch, the Historical Association, for information on Koster's Portuguese career.

[2] He inscribed to Lord Somerville his little book, *Description of a New or Improved Method of Constructing Wheel Carriages . . .* Liverpool, 1819. Somerville was in Lisbon in 1800. (Southey, *Letters*, Vol. I, p. 100).

[3] William Hickey, *Memoirs*. London, 1919. Vol. II, 1775-1782, p. 361.

[4] J. W. Warter, *Selections from the letters of Robert Southey*. London, 1856. Vol. I, Lisbon, 23rd June, 1800. Southey found Koster a man "whose opinions call forth somewhat more freedom of conversation than I allow myself elsewhere."

[5] *ibid.* Vol. II, p. 230. 8th September, 1811. " . . . stopped two-and-a-half days at Liverpool with Koster."

[6] Henry Koster, *Travels in Brazil*. London, 1816, p. 115.

great Lisbon earthquake of 1755, helping to make it possible for Pombal to attempt his programme of reform, and to begin to combat English economic control over his country. As early as the 1750's England was recognised as the recipient of the larger part of the output of the Brazilian mines, which flowed out of Portugal in paying for imports ; [1] right down to the early 1790's Brazil made Portugal a principal source of gold. During the greater part of the eighteenth century the mint ratio of silver to gold in England was more favourable to gold than the market rate or the mint ratio of most other countries, so most of it found its way into the English monetary supply.[2] The Portuguese balance of trade, in spite of the English consumption of port, remained passive for most of the century.[3] Pombal used the proceeds of the Brazilian mines in an attempt to break the English grip on the wine industry, and to lessen the English monopoly of manufactures by a programme of industrial subsidies, but it was to England that the bulk of Portuguese gold still went, making it possible for the Bullion Committee to observe with some complacency that "maritime and commercial advantages" had served to make England the channel through which the gold of Portuguese and Spanish South America was still disseminated to Europe, giving "us the opportunity of first supplying ourselves." [4] Because the export of gold was illegal, and because political considerations seemed to make it wise to keep the extent of the gold resources secret, it was impossible to know with precision the amount that came to or left the country.[5] Abraham Goldsmid would make no guess.[6] But Koster calculated that the five Lisbon packets operated by the

[1] Lucy Stuart Sutherland, *A London Merchant*, 1695-1774. London, 1933, p. 20.

[2] W. P. Morrell, *The Gold Rushes*. London, 1940, p. 41.

[3] V. M. Shillington and A. B. W. Chapman, *The Commercial Relations of England and Portugal*. London, n.d., p. 287, *et seq.*

[4] *Report*, p. 9.

[5] No account of exports or imports of bullion was kept at the Customs House. *ibid.*, p. 29. *Minutes of Evidence*, p. 209.

[6] *ibid. Evidence*, p. 17. Nor would Charles Lyne. *ibid.*, p. 48. It seems possible that some light might be derived from the returns at the Bullion Office and the London Trade List.

Admiralty, shuttling to and fro from Falmouth, together making on the average about twenty-two voyages annually, along with a few merchantmen and the four or five British ships of war that called, carried to England each year something like a million pounds worth of gold.[1] It is not surprising that Koster, engaged in this flow, became imbued with the idea that the supply of gold for monetary use had lost its traditional stability, that Europe had been enjoying a windfall for some fifty years, and that it had generally been forgotten how recent a phenomenon this increase in the supply really was.

His impression of the arbitrary natural circumstances governing supply was reinforced by the irrational conduct of those to whom the access of precious metal had first come—the Portuguese government. Like so many rulers, the latter had adopted the view that there was something ultimate or absolute in gold as an element of wealth, instead of treating it as a means of making claims upon the goods and services of other countries. The result was a policy of restrictionism and gold conservation. The Brazilian gold workings were technically backward, falling well short of the level of the sixteenth century mines of Germany.[2] Portugal distrusted foreign experts who might have improved things :[3] Koster himself had made the acquaintance of a Portuguese gentleman in Lisbon who at government expense had done an extensive tour of the European gold workings with the express purpose of improving output in Brazil, but who appeared to make no impression on the problem because of the operation of intrigue and vested interest.[4] One fifth of the gross produce of the mines was exacted as government duty ; the development of new workings was hindered by the safeguards involved in keeping the supply of diamonds discovered in Brazil within the limits of a high price market. But however the government might try to retain the influx of gold within its tiny area, the temptation to

[1] *Short Statement* . . . p. 16. It would seem that no great quantity reached England from the Spanish possessions until about 1795, since when some £700,000 had come annually, chiefly through Jamaica.

[2] Morrell, *ibid.*, p. 23.

[3] *ibid.*, p. 34.

[4] *Short Statement* . . . p. 44.

export it to a place where its purchasing power was so much greater was irresistible. Though there were occasional attempts to enforce the restrictions on gold exports (the law provided for the death penalty), they were never persisted in for long. Koster became a realist in the matter of bullion-merchants' behaviour ; prohibitions against melting and exporting coin such as were in force in Portugal and England were simply covered by a risk-premium—they were merely an additional cost.[1] Thus the arbitrary and unpredictable nature of the conditions of supply was further aggravated by the operation in Brazil and Portugal of private interest, jealousy, and court intrigue ; Europe was acquiring its new gold in a manner combining natural accident and human greed and irrationality.

It is of some interest to compare the reasoning of Ricardo and Koster in the matter of policy for a gold producing country responsible for a large part of the total current supply. Ricardo argued in his *Principles* [2] that if one country was a monopolistic producer of gold, a government tax on production was not always mistaken. A fixed tax per mine worked would serve to raise natural value (long run cost), and market value in Europe (being regulated by natural value in the producing country) would rise : "More commodities would be given by Europe for a given quantity of gold." But the amount of gold produced would fall, until the new contracted supply, multiplied by the new gold price, yielded the same value of European goods as before. In the upshot, Europe would provide the same goods for a lesser quantity of gold. Mines would fall out of production and capital go elsewhere depending upon the relationship in each case between the fixed levy and the total output. The gain for the gold producing country would be represented by the freeing of resources from the less productive

[1] In this, of course, he shared common ground with Ricardo and the bullionists. It would appear, however, that much gold export from Lisbon was in the form of the beautiful coinage of John V, which constituted "a regular, though forbidden trade, from the very time of its origin." *ibid.*, p. 61.

[2] *On the Principles of Political Economy and Taxation.* (*The Works and Correspondence of David Ricardo.* P. Sraffa, ed. Cambridge, 1951. Vol. I). Chapter XIII, *Taxes on Gold.*

mines. If the tax were proportional, say one-fifth of the produce, the effect might be different. It would still be in the interests of the mine-owners to produce as much as before ; the quantity provided to Europe would remain unchanged, and hence the gold-goods ratio would be unchanged. The tax would fall on the people of the colony, to the benefit of the King. Thus no net good would accrue through restriction to the people of Brazil and Portugal.

But Koster's mind did not work in terms of these hypothetical comparative statics. He regarded a country to which new gold first came, like Portugal, as in a position to make continuous claims upon the real goods and services of other countries ; hence the restrictionism of the government and the tax of one-fifth on the produce of the mines was a mistake. From the Portuguese point of view, he believed every effort should be made to levy upon the products of Europe through purchases financed by gold. It was idle to try to restrict Brazilian production in the attempt to find the point at which, in the longer run, a minimum of mining effort would bring the same quantum of European goods, for who could say when other rivals might appear ? It was in the interests of Portugal and Brazil that some spirit should be infused "into the mind of the Prince Regent of Brazil and his government" [1] to extend prospecting and improve techniques so that the former difference between the cost of production and the European equivalent in goods might be restored. But it was the position of Britain that concerned him most : if new gold were rapidly forthcoming then the most pernicious characteristic of the bullionist—that he was also deflationist, would be much mitigated.

Soon after 1792 Koster observed that the amount of gold available in the Lisbon market was falling off, became very small by the time of the flight to Brazil of the Prince Regent before Junot's Army in 1807, and then pretty well ceased. It had become common talk in Lisbon by 1790 that the Brazilian mines were near exhaustion, and that the mining

[1] *Short Statement* . . . p. 108.

promoters found that their slaves did not earn for them more than 50 *reis* daily or about 3½d. each.[1] By 1794 Koster had noted that the quantity of gold collected at Lisbon at any one time for export to England was not enough for the captains of His Majesty's men-of-war to trouble themselves with.[2] But for Europe generally the change in circumstance had been masked by imperfect information and time lags, so that in 1797, the year of Bank Restriction, there was, according to Koster, no general appreciation of what had occurred: "perhaps very few people have had such opportunities of seeing and observing its progress as myself."[3] From that time, he says of the European gold supply, "I never lost sight of its progressive decrease," and it became one of his principal preoccupations to watch its course. Soetbeer's ten-year averages certainly bore him out in the first two decades of the century, giving world production at some seventeen tons annual average for the first ten years, and eleven for the second.[4]

By the late 1790's the operations of the mints both in Brazil and Portugal had almost stopped. The Portuguese government in its extremity had recourse to an issue of paper money.[5] This they did apparently without any troublesome search for a guide to quantity. The larger coins quickly disappeared, and soon the economy was operating on a heterogeneous currency of paper, silver and copper, underweight gold coins, and foreign currencies. Yet transactions did not cease, each element of the circulating medium soon found its level in terms of the rest, and in terms of the now fictitious

[1] *ibid.*, p. 41. Koster, like Jevons, found that gold miners, "unwilling, like men in every other department of life, to change their habits and occupation, went on working in this unprofitable pursuit."

[2] *Further Observations on Bullion and Bank Notes* . . . Liverpool, 1811, p. 49.

[3] *Short Statement* . . . p. 73.

[4] *Vide*, Sir Walter T. Layton and Geoffrey Crowther, *An Introduction to the Study of Prices*. London, 1938. p. 249.

[5] *Short Statement* . . . pp. 59-65.

money of account, the *rei*.[1] Though the paper fell at the outset to a considerable discount, its issue stopped when the Regent emigrated, and a fairly stable relationship ensued. Moreover, though the exchanges had moved against Portugal when the discount on paper was appearing, they did so less than proportionally.[2] By the turn of the century, in fact, with the Portuguese passive balance with England rapidly disappearing, the exchanges moved in her favour.[3] The government, incapable of sponsoring the kind of reform advocated by the English bullionists, had been saved from its embarrassment by the people themselves who had established their own scale of equivalences. The pattern of production and of foreign dealings had followed its own course, ruled by natural and technical circumstances, assimilating to itself the new monetary regime.

Did the failing of the gold supply adjust the trade balance with England by causing Portuguese exports of consumable products to improve through an easing of the upward pressure on domestic prices, or did the Portuguese trade balance adjust itself in response to other factors such as Pombal's new industries, in such a way that it was no longer profitable to offer gold for export to England? There is certainly some evidence that Koster exaggerated the rate of

[1]The government attempted to control the paper-gold relationship by making paper legal tender for one-half of any payment to be made, including taxes. But the public at any moment had in mind a ratio, derived from the respective purchasing power of the two elements, and prices were arrived at accordingly. These, said Koster, were expressed in the now notional *rei*, in terms of which the value of both gold and paper were calculated. But though the public could continue to buy and sell in the hybrid form of payment, the government could not really thereby save its paper from depreciation : as the paper approached zero value in *reis*, the calculation of price would become in effect in terms of the gold-rei relationship alone, as the paper approached parity with gold the legal requirement to accept it would become a nullity. The government itself from the fiscal point of view would have to design its tax rates in much the same terms. The legal provision might have some short term effect as a non-rational reassurance, stopping a flight from paper, but the very nature of such an enactment would suggest that the government doubted the public attitude to its notes.

[2] *Vide*, *Evidence of Charles Lyne*, *Bullion Report*, p. 47 *et seq*. Also *Evidence of J. L. Greffulhe*, p. 72.

[3]Shillington and Chapman. *ibid*., p. 289 *et seq*.

decline of the Brazilian mines,[1] and minimised the effects of the changes in the nature of Portuguese and Brazilian trade on the availability of gold at Lisbon.[2] He saw the matter exclusively in terms of the fall in gold output. Whatever the relationship between these phenomena, the economy of Portugal at the turn of the century was settling down to living to a much greater degree upon the production and exchange of other goods. Brazil turned increasingly from the digging of gold to the growing of sugar and cotton. Soon the latter was replacing gold in the traditional flow to England.[3] As Southey noted in 1800 the Portuguese merchants were at last in the ascendant over the English. Cotton did not wholly close the gap ; the Portuguese balance with Britain was often passive. But she was frequently in substantial credit at Hamburgh, Amsterdam, Genoa and other places. Portuguese drafts on these centres were remitted to England in settlement.[4] Bullion movements at Lisbon were often reduced to mere equalising transactions, and observers noted several instances of an identical gold consignment moving to and fro between Lisbon and London. Abraham Goldsmid informed the Bullion Committee that "toward the middle of the year 1808, the merchants trading to the Brazils and Portugal purchased gold and silver bullion, instead of selling it as before." [5] But Koster did not wait for this inversion ; he returned to England in 1801, and found his way to Liverpool, where he already had connections, whose merchants had recovered from the initial shock of war in 1793 and were now enjoying unprecedented prosperity.

His Portuguese experience had yielded two great lessons. The world could be divided into gold producing areas—Asia, Africa and the Americas, and a gold using area—Europe ;

[1] *Bullion Report, Evidence of John Allen*, p. 149 ; *Accounts*, pp. 29, 30.

[2] Both Ricardo and Adam Smith made a good deal of the adverse effect on the trade balance of Spain due to the silver which came from South America and was retained in Spain by the prohibition of export. *Principles*. p. 228.

[3] *ibid*. Evidence of Charles Lyne, p. 49.

[4] Charles Lyne, *A Letter to the Right Hon. George Rose, M.P. . . . in which the Real Causes of the Scarcity and consequent High Price of Gold and Silver are Stated and Exemplified*. London, 1810. p. 24, *et seq*.

[5] *Evidence*, p. 48.

and the fundamental considerations for those favouring a currency consisting of or based upon that metal were to be found in the conditions of supply and demand over a period of years. Secondly, gold was in no wise different from any other commodity, and attempts to regulate its price by edict were futile ; the trading community was best left to itself in assigning values to the media of exchange. Portugal had purged Koster of those "peculiar reasons deep in our subconscious why gold in particular should satisfy strong instincts and serve as a symbol," [1] or as he himself put it, the "idea of something supernatural." [2]

III.

When de Quincey was passing through Liverpool in 1807 on his way to visit the Wordsworths in the Lakes he, in the company of Mrs. Coleridge, was entertained at the home of the Kosters. Here he met not only John Theodore, whose house had become the resort of distinguished foreigners, but his family. De Quincey was as charmed as Southey, and described the household as "the most accomplished I had ever known." [3] There were his talented daughters who did not hesitate to share the drawing-room entertaining honours with the celebrated Madame Catalani ; there was the son, Henry,[4] who was to follow his father's interest in Portuguese South America by extensive travels in Brazil. Under the aegis of Southey, with whom he toured the Low Countries in 1815,[5] Henry wrote effectively of his Brazilian journeyings, and of the particular problem of South American slavery,[6] both matters of great interest in a town eager to obtain information for the penetration

[1] J. M. Keynes, *A Treatise on Money*. London, 1930. Vol. II, p. 290.

[2] *Short Statement*, p. 30.

[3] De Quincey, *Works*, ed. of 1863, Edinburgh. Vol. II, p. 128. De Quincey described Koster as "an English gold merchant of celebrity."

[4] *Vide, Biographie Universelle*, Paris, n.d. Here the birth of Henry is wrongly stated to have taken place in Liverpool ; it was in fact at Lisbon in 1793.

[5] See Robert Southey, *Journal of a Tour in the Netherlands in the Autumn of* 1815. 1903.

[6] *Vide, Travels in Brazil*, Chapters XIX and XX. Also *On the Amelioration of the Slave Trade*. Pamphleteer, Vol. VIII. 1813.

of new markets and ammunition for the conduct of an old debate.

It would seem that John Theodore, in the latter part of his stay in Lisbon, with the flow of gold so attenuated, had already begun to interest himself in Portuguese colonial produce. Brazilian cotton first arrived in Liverpool in 1781, and was found a strong and fine staple with many uses.[1] Until the Napoleonic threat it travelled *via* Portugal, and Liverpool trading connections were made with Houses in Lisbon. With the exposure of the Peninsula to the French, and the weakening of the hold of the mother country upon the Brazils, a direct commerce between the colonies and England began to develop. Brazilian cotton was making its way increasingly to Lancashire, *via* Liverpool, in spite of the fact that it had to pay, under the Act of 1803, some 12s. 6d. per 100 lb. weight if brought in British ships, and £1 0s. 10d. in foreign, as against an impost of only 8s. 4d. on British colonial cotton.[2] Koster soon became a leading local importer, shipping cotton in considerable quantities from Maranham and Pernambuco. He first appears in the town in 1803,[3] as a merchant, conducting his business from his own house. By 1810, he had prospered sufficiently in his new endeavours that the counting house was no longer an annexe to his home, but was situated in the new Exchange Buildings. By 1812 he was importing [4] some 4,000 bags of Brazilian cotton (about 180 lbs. to the bag) of a total value at ruling prices of some £90,000. In addition there was the occasional speculation in barilla and ipecacuanha.

[1] John Slack, Cotton Broker and Accountant, *Remarks on Cotton*, Liverpool, 1816. p. 24. Shillington and Chapman say that Brazilian cotton first arrived in England about 1767. (p. 287). For the volume of exports from Maranham and Pernambuco, 1809 to 1815, see Henry Koster, *ibid.*, pp. 170, 369.

[2] *ibid.*, p. 288.

[3] *Gore's Directory*.

[4] Calculated from the *Liverpool Mercury*, where under the heading "Vessels Arrived," cargoes and consignees are listed. The manner in which Koster paid for his cotton is of some interest. Charles Lyne told the Bullion Committee (p. 49) that gold was going in considerable quantities from England to Pernambuco and Maranham in payment for cotton. But Koster since returning to England had handled no gold whatever ; he had "not even seen a bar or an ingot of the metal." (*Further Observations*, p. 39).

Soon Koster had established a dual reputation in Liverpool —for hard-headed good sense and reliable information, and for innocent eccentricity which took as its principal form the obstinate denial of certain celebrated events, including the battle of Talavera.[1] On the latter occasion he backed his conviction with a large wager. As became a man with a full career in an exotic traffic already behind him, he had a fund of anecdotes to point up his arguments on economic matters and could refer casually to the monetary conditions of France and Europe "long before the revolution." [2] As a Member of the Royal Academy of Sciences at Lisbon, he was held in high respect by the local sons of the Enlightenment who were just beginning to turn their attention to the sponsoring of scientific and cultural activities. Along with the other local worthies Koster subscribed £100 to the Liverpool Institution ; [3] his inquiries into the constitution of the Royal Institution, London, as a guide to the local innovators, were greatly appreciated.[4] The celebrated Dr. Traill, physician to the Liverpool Ophthalmic Infirmary, later Professor of Forensic Medicine at Edinburgh and editor of the eighth edition of the *Encyclopaedia Britannica*, helped Henry Koster in the preparation of his book.[5] The great interest of John Theodore in the scientific field was in the design of wheel carriages. He and his son Henry were the recipients of those letters from Southey which now constitute a principal source of information upon that author's studies of Portugal and Brazil.[6] With Southey he discussed by letter political problems both domestic and foreign, including the value of gold and its relation to prices. He had an eye for things well designed and executed, comparing the coinages he discussed not only as to content and value, but also in point of beauty. Though he scorned the mystic reverence that had

[1] De Quincey, *ibid.*, p. 129.

[2] *Short Statement*, p. 89.

[3] *Liverpool Mercury*, 7th April, 1814, p. 321.

[4] A. T. Brown *Some Account of the Royal Institution School, Liverpool.* Liverpool and London, 1927, p. 9.

[5] *History of Brazil*, p. 5.

[6] J. de Sousa—Leão, *Southey and Brazil, Modern Languages Review*, Vol. XXXVIII, July, 1943, Number 3, p. 185. The letters are now in the possession of the *Instituo Histórico e Geográfico Brasileiro.*

come to surround gold, the aesthetic in him revolted at "the ragged, greasy, offensive bank notes" then current in Liverpool and Lancashire.[1] He was a believer in direct inquiry, cross-examining the leading local watchmaker on the changes in the amount of gold annually consumed in his trade, commenting upon the number of large but elegant gold timepieces displayed by the American sea-captains on the Liverpool quays, and noting the number of persons in England, traditionally content with the parish clock, who now carried their own watches.[2]

This sort of observation in Liverpool and elsewhere produced in him a conviction concerning the gold problem that was the complement to his Lisbon experience of the arbitrary nature of the supply side. He became convinced that the bullionists had an incorrect view of the demand; they had grossly under-estimated the amount of non-monetary consumption. Since the 1790's, he maintained, with the rise of the United States and with the changes that were accompanying the increasing productivity of industry, gold was being swallowed up for personal use at a hitherto unprecedented rate. His opponents might argue that with the increase in the paper price of gold there would be a disincentive to use it for ornament, but Koster believed that this was more than overborne by the new sort of demand pattern among those in receipt of rising incomes. With overall income increasing, such persons were prepared to forego more in absolute terms for purposes of adornment. Those who believed that the English gold that had fled the country after 1797 was now circulating or lying in monetary hoards on the Continent, as an active or ancillary part of the circulation, were mistaken; Europe too was consuming more. Thus he viewed gold not as exclusively or even predominantly, a monetary medium; under the influence of the universal changes of the day it had become a commodity for use, and such demands upon it were more likely to increase than to diminish. It was Koster's conviction, which he attempted to establish, that the non-monetary consumption of gold, "far, very far, exceeds the quantity of late years

[1] *Short Statement*, p. 81.
[2] *ibid.*, pp. 21, 90.

produced by all the mines in the world."[1] He persuaded Southey, then engaged upon long debates with Coleridge on the currency, to the same view.[2]

Koster had discussed much with his friends in Liverpool on the matter of the currency, and it appears that no efforts were spared to cause him to temper his strong opinions. He drew copiously on his Portuguese experience, and had kept by him the writings of Antonio da Silva, Assay Master of the Mint at Lisbon, wherewith he sought to confound his adversaries.[3] He was no man to be overborne by weight of authority or frequency of testimony. But it required the reading of Ricardo's *High Price of Bullion* while on a visit to London in April, 1809, to provoke him beyond gentlemanly verbal debate. He began scribbling memoranda of his objections.[4] Back again in Liverpool with the cares of his growing business be put the matter aside. The publication of the Bullion Report stung him into resuming the subject, and with a burst of application he dictated to the daughters who had bewitched de Quincey, serving in turn as his ammanuensis, his "*Short Statement of the Trade in Gold Bullion.*"[5] In it he undertook to show "the true causes of the general scarcity and consequent high price of that precious metal," and to subvert the bullionist position by "demonstrating that the notes of the Bank of England are not depreciated." A second edition was published, followed by "*Further Observations on Bullion and Bank Notes,*" Liverpool, 1811. The very fact that his ideas appeared to have no other protagonists at the time of his first publication seemed to him the strongest argument for hurrying into print so that he might make some impact upon the Parliamentary debates.

He did not fit readily into the groups into which Liverpool opinion on economic matters of the day tended to fall. Broadly there were two factions—the intellectuals of the school

[1] *ibid.*, p. 22.

[2] *Letters*, Vol. II, p. 224, 17th May, 1811. Southey believed that the Brazilian gold mines had only been scratched, and were likely to be made as productive as ever. (*ibid.*, Vol. III, p. 136).

[3] *Short Statement*, p. 77.

[4] *ibid.*, p. 6.

[5] *Further Observations*, p. 7.

of William Roscoe and James Currie who fought for a breaking up of commercial restriction, on *a priori* grounds, and the older empirical view which attached much importance to the particular advantages Liverpool seemed to obtain in the general network of regulation. Koster would approach the system of currency and commercial regulation in the spirit of repeal, not enactment : he desired to clear away "the rubbish of the law." [1] As one who for a quarter century had bye-passed the official channels in Lisbon he resented the incongruity, confusion and contradiction of legal restrictions and the tedium involved in getting satisfaction at the Customs House. He shared the view of the local Liverpool "intellectuals" that the Orders in Council were a mistake,[2] doing more damage to Britain than to France, and held the opinion expressed in a *Resolution* of Liverpool Merchants in 1810 that the problems of gold supply and the exchanges would best be solved by rescinding the Orders and allowing trade to make the necessary adjustments. But at one point he stopped short of the critics of official policy ; he would not join in the charges levelled by the more extreme local radicals at the conduct of the Bank of England and refused to subscribe to the bogy of a money power.[3] Koster, like so many merchants of the day, regarded the credit instruments which the parties to trade brought into being as governed by their own laws, needing no safeguards in terms of rules binding the Bank. This was an attitude particularly strong in Liverpool, which produced a formidable number of anti-bullionists.

Koster was impatient both of theorists and particularists. The former he dismissed as people "who think, or fancy that

[1] *Short Statement*, p. 46.

[2] *ibid.*, p. 111. Koster was understandably annoyed that with the price of Brazilian cotton in 1810 at 2s. in England, and at Amsterdam worth 6s., at Paris some 8s., its sale to the Continent was forbidden. (*Bullion Com., Evidence*, p. 67). "Had we ever so many guineas in circulation," he complained, "they would be forced out of circulation by such a policy." (*Short Statement*, p. 113).

[3] *ibid.*, p. 9 *et seq.* Koster accused the bullionists of behaving improperly in the face of the French danger, in "drawing any inference to the discredit of our paper currency, from the depression of our exchanges with foreign countries." (*Further Observations*, p. 46). For this problem of "loyalty" see Jacob Viner, *Studies in the Theory of International Trade*, New York and London, 1937, p. 132.

they think, deeply on the subject." [1] It was a disservice, he claimed, to discuss economic matters as though they were a mystery within a cloud; economic policy "ought to be, and actually is, plain to the most ordinary understanding," and no special class of pundits was called for because the man of commerce, however involved in his own concerns, cannot avoid "meditating upon some point or other of political economy at every vacant moment." [2] In general he was astonished at the vagueness of the ideas of many reputable Liverpool men on a subject which appeared to him so lucid, and their tendency to be misled by irrelevancies. Such distinctions as that between value and price annoyed him beyond measure. The public figures purporting to show the nation's balance of payments were almost useless; export figures for example merely showed in some sort of value terms what had gone abroad, but took no account of such losses as had lately occurred in the South American and Northern European Trades. Lengthy analyses of particular exchange rates were equally futile: he believed that the complexities of rates between the different European countries were such as to be comprehended only by a few merchants in London, "and three or four Jew-brokers they employ in these operations." [3] One reviewer had the temerity to remark that Koster's opinions would be different if he were more conversant with the principles of commerce, provoking him to refer to "those gentlemen who read and write, but do not buy and sell." [4] He was especially incensed by the opposite suggestion: that his experience as a bullion merchant had warped his ideas and disqualified his testimony. Where else, demanded this interrogator of watchmakers, should one go for sound information concerning a set of transactions but to those who perform them? [5]

These elements in Koster's attitude help to explain the unequivocal position he adopted on the currency question.

[1] *Short Statement*, p. 8.
[2] *ibid.*, p. 115.
[3] *ibid.*, p. 71.
[4] *Further Observations*, p. 32.
[5] *ibid.*, p. 39.

He regarded the attacks on the conduct of the Bank Directors as unfair and futile. He had no patience with the abstract insights of Ricardo and the rest, and believed that no amount of fumbling about with the foreign balance or with the exchange quotations on Hamburgh and Amsterdam by the Bullion Committee and others would lead to a reconstruction of the pattern of international transactions so that their nature would be laid bare. But he was convinced that the root of the matter lay in the trends exhibited in the global supply and demand for gold.

IV.

Lisbon had taught Koster something of the conditions of supply attaching to Europe's gold; Liverpool and England had formed his ideas on demand. Europe in general and England in particular were confronted with erratic sources which, under conditions ruling in 1811 and earlier, showed a strong downward trend. Demand also was difficult to predict, but in recent years under a regime of rising incomes, it was becoming much higher and more inelastic as the pattern of consumption changed. These facts had escaped those authors, Koster maintained, who appeared to be in the majority, who "take up the question too recently, and somewhat superfically."[1] The suspension of 1797 itself, so confidently assigned to the disruption of commerce and the needs of government, was but the precipitation of an event rapidly becoming inevitable: "The true and real cause was the actual scarcity of the metal coupled with the determination to maintain a fixed parity."[2] The failure to appreciate this fundamental element in the situation, Koster claimed, had given rise to unnecessary alarms as to the effect of the paper circulation, and ill-founded remedies in terms of an attempt to resume the former relationship between paper and gold.

Paper had been made the villain of the piece, a rôle really played by gold. In his defence of paper Koster attacked those quantity theorists who, in terms of a simple comparison between

[1] *Short Statement*, p. 73.
[2] *ibid.*, p. 23.

the size of the paper issue and the course of prices, argued that over-issue had lifted the whole price structure. Adam Smith, Koster complained, had started this line of thought by arguing in the main in terms of two prices—wages and corn. The growth of British industry and exports had brought the wealth necessary to expand the population, and had simultaneously raised its real wages, said Koster, so that great pressure resulted upon corn land, needed for "an additional supply of fat beef and mutton." [1] Accordingly the cost of labour and, the cost of corn had risen, along with lead, tin, butter, tea, and, of course, gold. But there were other prices which had remained stable over the previous ten years, or had in fact fallen : sugar, coffee, cotton, iron, copper, coal. In each case, Koster maintained, the peculiar conditions of supply and demand should be taken into consideration, rather than the adoption of any single explanation in money terms. It was a favourite position of Koster's that "if any single article could be found, which bore the same price twenty or ten years ago as it does now, in relation to our normal currency," then the claim that "a superabundance of money causes a rise in the price of all commodities," [2] must fail. George Booth, a fellow townsman, accepted this, and undertook to demonstrate [3] that the supply of coal to Liverpool was just such a case ; the canal boats and carts of vigorously competing mine proprietors, converging on the town, had brought coal at a constant price over many years of currency fluctuations ; thus the quantity theory was not the statement of a universal truth.

As a Liverpool merchant with extensive experience of the Lancashire bill system, Koster tended, like others of his fellow townsmen, to regard the issues of the Bank of England and of the Country Banks as a particular form of commercial paper. Like the supporters of the Bank in London, he believed that if

[1] *ibid.*, pp. 52, 53. Koster was not optimistic about the prospects of improving agricultural output by enclosure. (*Further Observations*, p. 12).

[2] *Short Statement*, p. 51. This was a favourite theme in Koster's conversation.

[3] *Observations on Paper Currency, The Bank of England Notes, and on the Principles of Coinage, and a Metallic Circulating Medium.* Liverpool, 1815, p. 8.

such institutions kept a proper eye on the need for short-term liquidity, no evils could befall.[1] Their paper was no more capable of inordinate issue than were the acceptances of the private merchant ; any excess would be immediately returned upon them, and hence the paper circulation ruling at any given time was the "correct" amount. Though there were from time to time liquidity crises these were due to the spirit of speculation, against which gold had been of no avail even in the days before Restriction. Furthermore, the issue of Bank of England notes, about which so much argument had centred, was so trifling compared with the volume of commercial bills as to be insignificant.

Thus he, like so many of his contemporaries, arrived at a reversal of the emphasis made by the Bullion Committee. For the latter, gold was the great insurer of stability, paper the source of aberration ; for Koster, gold was the arbitrary and erratic element, paper was intimately and automatically adjusted to the needs of commerce. His solution of course followed. Gold should be bought or sold like any other commodity at the ruling market price. Instead of the system of a fixed parity, which involved establishing once and for all the ratio between paper and gold, and adjusting everything else to it, including the accommodation afforded to commerce, the market parity should be adopted, which registered the public estimation of the day to day relationship between gold and paper.

Koster proposed[2] that the Bank Directors should be instructed to purchase gold at the market price, wherever it could be found, and when an adequate supply had been obtained, the government should repeal all existing laws on the currency, including the prohibitions against melting and exporting, and order a new coinage. This would consist of pieces of standard fineness, of a certain weight (say one quarter ounce) with no stipulation as to value. Market price would be the guide to the new paper-gold relationship, and the Bank

[1]Koster cordially agreed with the case made by the Directors to the Bullion Committee. *Short Statement*, p. 12.

[2]*Short Statement*, p. 57.

would be required to convert its paper, on demand, not for a fixed quantity of gold, but at the ruling price. The gold-broker's weekly list of the prices of bullion in terms of paper would serve as the basic guide to the new transactions. If this were done, the matter would appear in its clear and proper light : [1] authority would have ceased the attempt to fix a standard value upon gold. The paper circulating medium need undergo no sudden collapse ; such changes as were consequent upon the new system would follow gradually. For example, if gold were appreciated, it would put spirit into the flagging miners of Brazil to augment the supply. Gold would in fact become more readily available than before, so that those seeking liquidity and safety could the more readily obtain it.[2]

The true unit of account, Koster maintained, was the "nominal" pound sterling, and transactions took place in terms of this unit.[3] Just as the Portuguese *rei* was a notional entity, so too was the pound, with a fluctuating relationship to all other goods, including the precious metals. In short, Bank of England notes, plus private issues, along with the private credit instruments of mutual accommodation, all determined and limited by the needs of commerce, were the fundamental consideration.[4] Koster was prepared to make a few mild concessions to his critics. He agreed that a coin with no value stamped upon its face might cause some temporary confusion,[5] but "it would soon become a matter of convention or bargain." He conceded too [6] that if the world's gold position were as parlous as he had claimed, it would not be easy to find enough of that metal to embark upon even conversion at market rates.

He found some allies among the anti-bullionists ; Bosanquet, whom he believed had disposed of Ricardo, Charles Lyne, from whom the Bullion Committee had sought enlightenment on the commerce of Portugal and Brazil, Edward

[1] *ibid.*, p. 27.
[2] *ibid.*, p. 37.
[3] *ibid.*, p. 35.
[4] *Further Observations*, p. 52.
[5] *Short Statement*, p. 100.
[6] *ibid.*, p. 192.

Thornton, late His Majesty's Minister in Sweden, and Francis Percival Elliott. With these he agreed in arguing that the course of the foreign exchanges as a guide to the depreciation of paper was a bullionist bogy : the very large imports of corn, and their correspondence with adverse exchanges were enough to dispose of this criterion for judging the paper issue.[1] But all these men, though prepared to demonstrate other faults in the bullionist case, failed to seize Koster's fundamental point that all attempts were futile "to hold gold and silver at a fixed price, while they are subject to variations in supply and consumption like every other commodity."[2] The seeds of the trouble had been sown, said Koster,[3] in 1718, when by the Mint Indenture of that year, the guinea was ordered to pass as legal tender at a fixed value, namely 21*s*. From this act stemmed all the mistaken efforts to fix the value of gold in terms of the money of account.[4] But Southey, and certain Liverpool men in the radical, Unitarian tradition, not only accepted the idea, but pointed its pedigree. "He has, I think," wrote Southey, "established a principle of which Locke had a glimpse . . . that gold is as incapable of being kept at a maximum as any other commodity."[5] B. A. Heywood,[6] Thomas Martin,[7] James Cropper[8] and other Liverpool merchants maintained the same principle. Martin and Heywood quoted Locke, the latter to the effect that : "It is very unfit and inconvenient that gold or any other metal should be made current legal money at a standard settled rate."[9] Thus did Koster, with

[1] *ibid.*, p. 108.

[2] *Further Observations*, p. 51.

[3] *ibid.*, p. 34. *Vide*, H. D. Macleod, *The Theory of Credit*, London, 1894. Vol. II, Part I, pp. 470, 487.

[4] *Short Statement*, p. 28. The effect had not appeared for some time, because of the relative stability of the supply and demand conditions for gold and silver.

[5] *Letters*, Vol. 2, p. 224.

[6] *Observations on the Circulation of Individual Credit, on the Banking System of England, and on the Lancashire Means of Circulation.* Liverpool, 1820, Part II.

[7] *Observations on the Payment of Bank of England Notes.* Liverpool, 1819.

[8] Cropper circulated a memorandum on the currency among his friends in 1812. *Vide* Henry Gardiner, *Essays on Currency and Absenteeism.* Liverpool, 1827.

[9] *ibid.*, p. 13.

his system derived from the observation of the supply and demand conditions for gold, produce a case which combined neatly with the Liverpool confidence in a bill system, to form a union, seemingly blessed by the prophet of the Dissenters, John Locke.[1]

Ricardo, of course, would not entertain the suggestion. It would mean that "the Bank would itself have determined the price at which it should have sold gold from time to time to the public, because by extending or curtailing their issues, they had the power to make the price of gold just what they pleased." [2] This the Bank might do, either in pushing its own paper by generous discount policy, or in accommodating the government through Ways and Means. Koster's reply to this sort of criticism was simply that which became fairly general in Liverpool: that it was the volume of real transactions, and the consequent demand for discounts, which determined the money supply, and not the wilfulness of the Bank. But Koster under-estimated the power of the Bank, especially when made a creature of government policy, ignored the possibility of rigging the bullion market, and minimised the problems created by recurrent rushes for liquidity.[3] It seems doubtful whether adequate institutional safeguards could have been designed to make transactions between paper and gold a true "neutral" market. When a run began on the Bank, with paper presented for gold, the variation of the gold-paper ratio in terms of less and less gold per unit of paper could hardly fail to cause complaint and even uproar; an elaborate system of speculation would inevitably develop on the prospective course of the ratio.

[1] Liverpool opinion was not of course unanimous in this; Koster had a mild exchange with the anonymous author of *A Letter to John Theodore Koster in which the Arguments used by that Gentleman to Demonstrate that Bank Notes are not Depreciated are considered and Refuted* . . . Liverpool, 1811, and *a Short Reply to John Theodore Koster*. Liverpool, 1811.

[2] *On Protection to Agriculture Works*, Vol. iv, p. 227. Quoted Viner, *op. cit.*, p. 207.

[3] Though he did conceive gold to be an aid in this. It was in fact the argument that gold was available and would thus ease the scramble for liquidity that kept a place for it in Koster's system as opposed to Southey and others who would dispense with it. (*Short Statement*, p. 38).

But the fundamental prerequisite for convertibility at market rates for gold was that the Bank should possess, independent of gold, a principle to guide its discount policy ; this Koster too readily assumed was inherent in financing limited to short maturities and "real" transactions. Such a rule of convertibility as he proposed would of course limit the Bank in the amount of discounting it did, because as its issues extended the ratio would begin to move against paper in a general way ; gold would be demanded at the ruling price, and the expansion would soon become dangerous. But the Bank had no analysis available which could inform it with any precision as to the quantitative change in the ratio consequent upon any given change in discount policy, for the reactions of paper and gold holders would be in terms of the expected course of the ratio. Thus if the public believed the Bank to be extending facilities at such a rate that gold must appreciate in paper terms, most of its issue would be returned for gold almost immediately ; conversely if a contraction of credit seemed likely to lead to a relative appreciation of paper, there would be a flood of gold brought to the Bank for notes, which would of course reverse the deflationary policy.

This sequence depends on the general assumption that more discounts mean more paper demanded for circulation ; could there be increased credit facilities without a greater demand for notes ? Thus, starting from Koster's rule, suppose the Bank extends its discounts, its note issue will increase in some indeterminate proportion, but the new notes along with most of the old will be quickly returned upon the Bank for gold, because of the anticipated movement in the paper-gold ratio. The note issue would then be smaller than before the credit expansion began, and the gold stock of the Bank reduced. A position would finally be reached in which credit was easy, and the entire circulation was of gold (provided that the Bank started with gold somewhat in excess of its note issue at the ruling price). Bank notes would have disappeared, and the Bank would, like the banks of Liverpool and Lancashire, be confined to discounting. Thus the final effect of expansion under the Koster rule would be to banish the Bank's notes

altogether ; in the reverse case of deflation the gold currency would rush into the Bank and be almost entirely replaced by Bank paper.

These reactions would probably be rapid and strong, so that the course of credit policy would become highly erratic. Only if one or other policy was consistently pursued would there be stability ; progressive expansion leading to a gold circulation, or progressive contraction leading to a paper medium. The latter would create such strains as to be insupportable. Thus there remains as the only tenable condition for stability under convertibility at market price a steady expansion of Bank discounts, which by its own operation would keep paper out of circulation by the threat that the gold-paper ratio will always move against it.[1] There is one further qualification : if the supply of gold were to become easier, the ratio would tend to move against gold, but again no quantitative estimate would be possible.

Koster feared the arbitrary action of gold ; Ricardo feared the arbitrary action of the Bank. It did not seem possible to ensure against both : Koster would reduce the status of gold by reference to the market, Ricardo would inhibit the Bank Directors by the rule of fixed parity. The Directors, in their "Representation" of 1819, made a last suggestion that at least the experiment of "paying its notes in bullion at the market price of the day" might be tried. But they were unsuccessful ; [2] the upshot was the rehabilitation of the gold standard, and its dependence upon the successive "rushes" of Siberia, California, Canada, Australia, and South Africa, to relieve deflationary strains.

V.

Koster was disappointed with the reception accorded to his contributions to the monetary debate ; he looked with

[1]The Bank of course would only be able to meet this condition while its stock of gold was adequate ; if it was approaching exhaustion, the credit expansion must cease.

[2]Though the Commons Committee of 1819 asked one witness for his opinion of the compromise proposal that convertibility should begin at market price, with a gradual reduction until the traditional parity was reached. (*Select Committee on . . . Cash Payments, Evidence*, p. 171).

interest for the reviews,[1] but found his work little noticed. There was at least the consolation that the bullionists had been defeated for the time being at least ; but even when the debate was resumed after the end of the war, Koster took no further part. He was by then of advanced age ; by 1819 he retired from business, and the name of his partner since 1816, J. Gilfillan, stands alone among the Liverpool consignees of Brazilian cotton. With his family Koster moved across the Mersey to Birkenhead Priory. In this isolated spot his talented daughters started a little boarding school for young ladies, one of whom was party to a Gretna Green elopement with a gallant major, to the detriment of the establishment.[2]

But the elder Koster had his own pre-occupations : with his favourite researches into the design of wheeled carriages, and the threatened health of his son Henry. He had studied the literature on the problem of land transport, including the projects of the celebrated Richard Lovell Edgeworth,[3] and had become convinced that his own principle would result in great improvement ; he proposed "simply to transfer the weight of the body of the vehicle and its load from between the wheels . . . to the extremity of the axle-trees outside the wheels." [4] His *a priori* reasoning was subjected to empirical test in the spirit of Galileo—scale models embodying his own principles, and those of others, were run down inclined boards, and hybrid combinations of stage-coach and post-chaise bodies with various kinds of suspension appeared on the local roads.[5]

But in 1820 came the news of the death of Henry Koster, at the age of twenty-seven, in Pernambuco. The consumption that had attacked him as a boy in Lisbon had finally prevailed, in spite of his continuous travelling in search of health. Southey celebrated his virtues and his travels :

[1]He complained that the reviewers were not sufficiently "active in making themselves acquainted with the publications of the day." (*Further Observations*, p. 35).

[2]P. Sulley, *History of Ancient and Modern Birkenhead*. Liverpool, 1907, p. 48.

[3]*Description*, p. 9.

[4]*ibid.*, p. 21.

[5]*ibid.*, pp. 36, 37.

"And sometimes over thirsty deserts drear,
And sometimes over flooded plains he went,
A joy it was his fire-side tales to hear,
And he a comrade to my heart's content." [1]

Henry Koster had felt strongly the clash between the European half of his personality and the feudal primitiveness of Brazil : he feared the latter would destroy his interest in "what is rational and to be desired in this world." [2] He was disturbed at the light in which English and other merchants were regarded at Recife, and desired to hasten the building of churches in English communities, "which would make our opinions and assertions depended upon." [3] He argued effectively "The Impolicy of the Slave Trade," providing ammunition for the growing body of emancipators in Liverpool and elsewhere. He was an Englishman to whom England was almost an abstraction ; he could share with Southey the thrill of visiting the field of Waterloo, but he was more at home in the Portuguese language than his own. "England is my country," he wrote, "but my native soil is Portugal," [4] and in this spirit he undertook to demonstrate that the *Treaty of Commerce and Navigation* between the countries was fair and beneficial to both.[5]

The loss by Portugal of the monopoly of Brazilian trade, he felt, would benefit Portugal itself, for it would replace the former unhealthy dependence upon the colony with a new trade with other countries, based on the exertions of the Portuguese people ; this might hasten the abolition of the Inquisition and the revival of the Cortes.[6] In any case the deed could not now be undone, for the people of Brazil had tasted "the benefits which have resulted from the direct intercourse with Great Britain." [7] But he was not long to witness the new relationship ; the male line of John Theodore Koster

[1] *The Poet's Pilgrimage to Waterloo.* Quoted J. de Sousa—Leão, *ibid.*, p. 186.
[2] *Travels in Brazil*, p. 334.
[3] *ibid.*, p. 401.
[4] *ibid.*, p. 334. He identified himself so completely with that country that even his name was naturalised to Henrique Costa. (Sousa—Leão, *ibid.*, p. 185).
[5] *ibid.*, p. 457 *et seq.*
[6] *ibid.*, p. 463.
[7] *ibid.*, p. 472.

was extinguished in the remoteness of South America, leaving as its monument "one of the best books describing the north-east of Brazil, equally valuable for its iconographic documentation." [1]

The elder Koster remained for a further seven years at the Priory, still engrossed in his wheeled carriages ; "his known attachment to this branch of science," [2] became a prominent element in the legends that had accumulated round him. In 1821, in fact, he undertook to give a course of six lectures on the subject to the Liverpool Royal Institution, to the mild embarrassment of the trustees of that body. The latter further benefited by the gift of a model of a Jangada, or raft used on the north-east coast of Brazil.[3] He died in 1830 at Bordeaux, and Administration of his goods, chattels and credits was granted to his wife, Susanna Maria, who survived him in Paris until 1842.

John Koster was a good example of what the bullionists were up against ; he was one of those who postponed their victory. He was a simplifier, distrustful of the mysteries of cambistry, ruled by his own observations, the enemy of any proposal that would fix limits to the extension of business accommodation or elevate gold into a unique position. He was just the sort of man to confirm Southey in his hostility toward the Ricardian school with its search for automatism ; the cultured cosmopolitan merchant and the historian-poet with his anti-theoretical bias, could agree in opposing those they regarded as saying "we must build walls again to run our heads against them." [4] He was the enemy of the bullionist both in the older mercantilist sense, for to him gold was a thing to be freely exchanged for consumable goods, and in the sense of 1810, for gold at a fixed parity was no fit principle for the national monetary system. In this he was typical of the

[1] Sousa—Leão, *ibid.*, p. 182.

[2] *The Kaleidoscope*. Liverpool, 7th August, 1821, p. 36. Koster is here referred to as "this most respectable and intelligent gentleman, at an advanced age."

[3] *Secretary's Report*, 1825, Appendix.

[4] *Letters*. Vol. III, p. 136.

majority of Liverpool merchants of his day, and probably of English merchants generally. Though gold might become a century later "part of the apparatus of conservatism," the articulate portion of the merchant and banking community of 1810 stood between the rejection of mercantilist-bullionism and the acceptance of the bullionism of Horner and Ricardo.

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British and Foreign Immigrant Miners in Fife

The exhaustion of the workable coal seams in Lanarkshire.[1] and the development of those in the east, particularly in Fife and Clackmannan, has disturbed the existing distribution of the mining labour force in Scotland. Migration from west to east has been in progress for some years, and has been accelerated since the war, but the industry still faces a huge problem in trying not only to attract recruits to the developing areas, but to keep them there.

An important factor in the situation is the present condition of full employment in Scotland. If a miner leaves an obsolete pit in Lanarkshire he can easily find a job outside the industry, or, if he does migrate to Fife and finds that conditions there are not to his liking, he can return home without fear of unemployment. A number of other social factors also operate against the easy integration of immigrants into existing communities in the east of Scotland, and I propose to discuss some of them.

A count was made of the exact number of immigrants entering a Fife mining Burgh during the period from 1st July, 1948 to 30th June, 1949. This Burgh served ten collieries, of various sizes and stages of development. Each immigrant's history was recorded, and the reasons given for leaving by those men who left within twelve months of arrival.

The total number of miners entering the Burgh in the twelve months of observation was 809, and they fell into two main groups : British and Foreign. The British miners numbered 607, of whom 326 were from Lanarkshire ; the others were from various parts of Scotland, England, and Ireland ; three were from the Colonies. Not all were from mining areas, and some were volunteers direct from initial training. The bulk of the foreign workers were Poles, there being 166 of these. The next largest national group was of fourteen Ukrainians, and the remainder were from Latvia, Yugoslavia, and other

[1]In 1910 Lanarkshire produced 23·7 million tons of coal. This has fallen to 9 million tons in 1950.

Balkan countries. These foreign workers all came on completion of training and only a few had been miners in their own countries. The majority were ex-servicemen, with a few European Voluntary Workers.

Of the British immigrants, 56% subsequently left the area to go home, against only 22% of the foreign workers.[1] The foreign workers were therefore much more "stable" immigrants than the British.

The British miners came to the Burgh under two different schemes. The first was a group of pre-selected married men, to whom the National Coal Board had guaranteed a house within a short period of arrival. There were 81 of these, almost all experienced miners from Lanarkshire ; only one of this group subsequently returned. The other group comprised unselected volunteers, both married and unmarried, who were not guaranteed a house, and who had applied to transfer to Fife through the Labour Exchange (if already miners) or had volunteered for the pits from some other occupation. 64% of these returned to their homes.

The men arrived singly each day throughout the period of the count, the largest single group being seventeen men from Shotts, in Lanarkshire, whose local pit had been closed. On arrival in the Burgh each man reported to the Labour Exchange and was given a card to present at one of two National Service Hostels. They could either reside permanently in these Hostels or find a house or lodgings locally in which to live. If a man took a house or lodgings he was much more likely to remain in the Burgh, particularly if he was married ; the long-term residents in the Hostels were almost entirely bachelors.

When they had decided to leave few men gave definite reasons. Some had precise complaints about wages or conditions of work and left ostensibly because of these, but the majority were able to express only vague dislikes, either of the

[1]This percentage might have been lower still, for 15 men left through no fault of their own. They had been sent to work in a pit where the miners had not yet been officially consulted about the employment of foreign workers in their colliery. The Scottish miners threatened to strike if the foreigners were not withdrawn, and the 15 men were sent elsewhere.

work or of the local miners or of the Burgh as a place in which to live. Very often a man simply said : "I'm fed up."

An analysis of various groups of immigrants, and questioning of both immigrants and natives led to the conclusion that the considerable difference in the rate of egress of British and foreign immigrants could be due either to the conditions of work or to social factors or to some combination of the two.

Conditions of work appeared to play only a minor part in determining whether or not an immigrant would remain in the Burgh. Only 47 men made a specific complaint about wages or conditions, and 31 left within one week of arriving, which would lead to the belief that they had not made a fair trial of the new conditions. It is perhaps significant that 41 of the 47 were from Lanarkshire.[1] Only one foreign worker complained specifically of the working conditions and wages. If the conditions of work had been mainly responsible for causing men to leave, variations might have been expected in the rate of egress from collieries of different size and using different techniques. However, there was a difference of only 7% within the ten collieries, which had a considerable variation in both size and working conditions.

The reasons given by the immigrants for returning home were classified as two kinds of dissatisfaction, "specific" and "undefined." Men who left without giving any reason whatever were classified under "implied dissatisfaction." However, none of the reasons for leaving appeared to be the actual reasons, for the number of men in each category varied widely by collieries, although the total proportion leaving each colliery was strikingly similar. Thus, there appeared to be some common factor in all three categories. This can be illustrated by comparing two collieries.

[1]The main difference between conditions of mining in Fife and Lanarkshire lies in the thickness of the coal, which is generally about 4½ feet thick in Fife, compared to half this size and less in Lanarkshire. The thicker coal gives the men more room to work, but at the same time demands a different technique. A man who had developed skill in working a narrow seam, where, as he said : "You had to pass your pick out to have it turned round," found this skill obsolescent in Fife. It is also true that the larger seam usually demands that each stripper should handle more coal in one shift.

Conditions in these two pits were very much the same. Both were large and mechanised, each took almost the same number of immigrants, 202 and 203. From each almost the same number left, 91 and 95, but only under "implied dissatisfaction" were the numbers approximately equal, as shown in Table I.

TABLE I
NUMBER OF MEN IN EACH CATEGORY OF REASONS GIVEN FOR LEAVING IN TWO COLLIERIES

Colliery	Categories of dissatisfaction :			
	(1) Specific	(2) Undefined	(3) Implied	Total
A	24	31	36	91
B	8	50	37	95

The total number of men who left either colliery after giving any kind of reason at all ("specific" and "undefined" dissatisfaction) was practically the same, 55 and 58. But there was a considerable difference in the numbers of men from each colliery who complained about the conditions of work or pay, and those whose complaints were less precise. It may be inferred therefore that either many who left Colliery B saying simply that they were "fed up" ("undefined" dissatisfaction) had in fact a grievance about work or pay which they did not mention, or, what is more likely, the motives of all of these men were the same, and both vague and specific grumbles reflected some other undifferentiated cause.

That there was such an undifferentiated cause is also suggested when the men returning were listed by distance of domicile from the Burgh and irrespective of the reason given for leaving. It was found that men from other parts of Fife had the lowest rate of egress, and men from Ayrshire and the West the highest. That is, the rate rose with the distance of domicile from the Burgh. The more distant a man's home, the more likely he was to return, controlled by one important provision, that he could easily find a job at home.

Immigration into the Burgh was not a novelty. It had a history going back to at least 1905 when the population practically doubled in six years through large-scale immigration from Lanarkshire. This great influx left a tradition which was still current in an attitude of depreciation towards immigrants as such. The immigrant was considered to be inferior and of lower social status. This attitude, although it was manifestly unjust and in its implications perhaps untrue, was a positive attitude, and undoubtedly affected behaviour. Local people used often to say : "We have a different kind of miner here." They meant a superior kind. Immigrants were considered to come from "slums," to be "Glasgow Irish," to be "keelies," or "scruff."

Even under the most favourable circumstances, when pre-selected immigrants brought their families into new houses, they had to surmount the social hostility of the natives, many of whom, in addition to their general prejudice against immigrants, felt that every new house given to them meant one less for their own people.

This traditional attitude towards immigrants was re-inforced by the special circumstance that they lived in the National Service Hostels. Both Hostels were physically isolated from the town. They had been built during the war to house the increased mining force, of which a large number were young conscripts to mining, the so-called "Bevin Boys." These youths knew that their residence in the community was temporary, and tended to live rather like soldiers in a barracks, that is, they considered themselves a separate group and acted in a high-spirited way, which the community was apt to regard as socially irresponsible. These lads ignored, because they did not care to understand, local nuances of behaviour. As a result, the townspeople regarded the Hostels as being full of wild young men without much respect for the local proprieties, an attitude similar to that often adopted in other places towards a barracks.

Indeed, the rôle of the Hostel immigrant in the general nexus was clearly defined by the natives' attitude towards him. He was expected to be rowdy, to belong to a gang, to be

irresponsible, and ignorant of local standards of polite behaviour. This rôle was forced on him, partly because of inferiority in numbers, and he unwillingly accepted it, but not without bitterness. An unconscious recognition of the situation is implicit in the remark : "I wish to God we had half-a-million Lanarkshire men coming in. That would shake this lot up a bit."

The initial effect of Hostel life on the men was to create what is best described as a holiday atmosphere. They found that they seemed to have much more spare time than before, because they had fewer social obligations. They had to create a new routine to replace that of the home they had left behind. Among both married and single men there was a regression to a simpler and less responsible existence. Men would gamble in each other's rooms until the early hours of the morning, although some had to be on the first shift at six o'clock. They formed parties to go out drinking and dancing, to "pass the time." There was a certain competition, particularly among the younger men, to be recognized as having a "tough" attitude, and a general over-emphasis on masculine patterns of behaviour.

The men undoubtedly missed the customary social intercourse of family and neighbours. One man said : "Although I sound right rough among these others, I like fine to visit and meet folk." Thus, after the novelty of a "holiday" period of masculine gregariousness had worn off, the British miners tended to find an excuse to go home permanently, and if they found they could not think of an excuse, simply stayed away. One married man said : "It's fine for a wee while, but I'm fed up living like a single man, I'm away home to the wife."

The immigrants discussed the natives endlessly. As few of them were there for any length of time (most men who left did so within three months) and they arrived individually, the arbiters of Hostel opinion were those men who had been there longest. Most of these were single men, who had suffered the social neglect already discussed. Newcomers tended to prejudge their experiences with the natives in terms of the stereotypes they heard described and discussed within the

Hostel. The local miner was believed to be dull, humble, inefficient, and unsociable, as the following quoted remarks demonstrate :

> "They come in from the day shift, go to bed, and stop there until the next shift. All they think about is sleep."
>
> "This lot here is frightened to strike."
>
> "We wouldn't put up with that at home, but this crowd are terrified to talk to the manager."
>
> "In Lanarkshire the men are all pally, singing and talking together. Here, if fifty Fifers are having a smoke and somebody makes a remark, all the others put him down as a blether."
>
> "My wife is not going to like it here. These Fifers are a queer lot—they don't like us and they don't like each other, as far as I can see."

The local miners were constantly accused of a lack of solidarity and of accepting conditions of work which no self-respecting miner should, and of having no true sense of a miner's duty to himself and his comrades.

One of the main differences between the British and foreign immigrants was that the foreigners regarded the Hostels as a permanent feature of their lives, and accepted it. The British, however, regarded the Hostels as a temporary stage only in a progress towards absorption into the community at large.

The different background of the two groups was responsible for this difference in attitude. The foreign immigrants, most of them Polish ex-servicemen and single, had been accustomed to barrack-room life for a number of years beforehand. When they felt dispirited, these men had no home to "escape" to. When in fact some of them had a home in Britain, they left in the same fashion as the British. Eight of the ten foreign workers who left for "undefined" dissatisfaction had married during the war and were domiciled in Scotland.

The British immigrants, with wives and families left behind them, did not adjust themselves so readily to the male society of the Hostels, or rather, they soon tired of it, and sought every opportunity of going home. This applied to single men as well as married, although the single men tended to stay longer in the Burgh before returning. The expense of these visits helped to lower their real wages. And the more

distant the immigrant's home, the fewer the visits, and the likelier the chance that he would throw it all up and go home for good. However, this did not apply to Irish or Highland immigrants, for there was less chance of their finding another job at home.

The British immigrants never really settled in the Hostels, but always had the attitude of "working away from home."

CONCLUSION.

The investigation showed that the difference in the rate of egress of British and foreign immigrants was due primarily to social factors and not to the conditions of work or pay. The British immigrants' rate of egress also varied with the availability of jobs at home; the relative stability of the foreign immigrants was probably due to the lack of any possible alternative.

The most stable immigrants were, in order of relative stability:

(*a*) The British immigrants who were given houses, and were thus able to bring their families after them.
(*b*) The immigrants who took lodgings.
(*c*) The foreign immigrants.

The higher rate of egress of the British immigrants resulted from the difficulties they met in adjusting to Hostel life for that probationary period which they might expect to serve before being absorbed into the community.

This prompts the following comments:

Little was done to help the immigrants adjust themselves to the new social environment. The National Coal Board attended to such matters as the conditions of work and rates of pay, and provided houses for the pre-selected group. The success of this policy was evident; only one man from this group returned.

N.C.B. propaganda, through the Press, radio, Labour Officers, and so on, emphasised the "new life," "better conditions," and the "urgent need for miners," in the coalfields of the east, but on arrival the volunteer immigrant's first initial

contacts in the new community were with petty officials, first in the Labour Exchange and second in the Hostels. The Burgh Council had no official scheme for greeting the men. The need for social integration, perhaps the most important need of the immigrant, was ignored.

One immigrant, before returning home, said: "They promise you heaven and earth to come, but when you arrive the manager gives you your place and then leaves you to struggle on by yourself."

This statement of the situation, for all its vagueness and exaggeration, demonstrates the feeling of disappointment generated by the difference between conception and reality, and the recognition of the immigrant's social isolation.

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"CAHIERS ÉCONOMIQUES DU SERVICE D'ÉTUDES,"
No. 1—La Fortune Nationale du Grand-Duché de Luxembourg en 1950.

Published by Service d'Études et de Documentation Économiques,
19, Avenue de la Porte-Neuve,
Luxembourg.

"THEORIES OF SURPLUS VALUE":
by KARL MARX.
Selections—Translated from the German by
G. A. BONNER and EMILE BURNS.

Published by Lawrence & Wishart,
81 Chancery Lane,
London, W.C.2.
Price 25s.

"RATIONAL DECISION-MAKING AND ECONOMIC BEHAVIOR"—
19th Annual Report 1950-1951—Cowles Commission for Research in Economics.

Published by The University of Chicago.

"LE MAINTIEN DU POUVOIR D'ACHAT DES PENSIONS SOCIALES":
by ROBERT ROYER and GILBERT JAEGER.

Published in Brussels, 1951.

"ECONOMICS"—An Introduction for the Student and for Everyman:
by N. B. DEARLE.

Published by Longmans, Green, and Co., Ltd.,
6 & 7 Clifford Street, W.1.
Price 25s. net.

"PRIVATE AND PUBLIC INVESTMENT IN CANADA, 1926-1951":

Published by Department of Trade and Commerce,
Ottawa, Canada.
Price $2.00.

"ECONOMIC ASPECTS OF SOVEREIGNTY":
by R. G. HAWTREY.

Published by Longmans, Green, and Co., Ltd.,
6 & 7 Clifford Street, W.1.
Price 24s. net.

"THE PORTUGUESE COLONY OF MOÇAMBIQUE":
by C. F. SPENCE.
Published by A. A. Balkema, Bookseller/Publisher,
1 Burg Street, Cape Town, South Africa.

"LE SERVICE DE SANTE EN GRANDE-BRETAGNE":
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Published by Librairie Armand Colin,
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The Economic Functions of the Export Merchant

The Department of Economics in the University of Liverpool is conducting an enquiry into the changes that have taken place in the functions and status of the export merchant. The material on which this paper is based, has been collected from sources in and around Liverpool, including many merchants, bankers and manufacturers, the Chamber of Commerce and the Mersey Docks and Harbour Board. As Liverpool merchants deal with manufacturers all over the country, attention has not been confined solely to manufacturers on Merseyside, although the merchants with whom contact has been made were mainly Liverpool merchants.[1]

Although the term "export merchant" is obvious in its implication, it is necessary, at the outset, to define it a little more closely. "Export" speaks for itself but the term "merchant" is not so easily defined. There are, to-day, many exporters who call themselves merchants but who perform widely varying functions. In the past, the merchant was generally regarded as someone who made profits and losses through the free exercise of capital resources, while an agent only earned a commission on the business he transacted for other people. Acceptance of this definition, however, would now virtually eliminate the merchant. As will be made clear later in this paper, nearly all merchants now have agreements with the manufacturers of proprietary goods, giving them exclusive selling rights for particular commodities in specified markets. These agreements deprive them of the right to sell competing products in those markets and limit their freedom of action as between their suppliers and customers. Most, though not all, manufacturers, fix the prices of such goods and the commission to the merchant. This type of trade now

[1]The authors wish to acknowledge their indebtedness for help in the collection of material to the Liverpool Chamber of Commerce, the Mersey Docks and Harbour Board, many Liverpool merchants and manufacturers in the country at large who are too numerous to list individually.

constitutes a very large proportion, often as much as 90-95% of many merchants' business. In such circumstances, the question arises whether we can still call a man a merchant who engages in this trade. From a financial point of view it is difficult to say that he is, but if we regard the term merchant in a functional rather than in a financial light, the answer can be in the affirmative.

The prerequisites of trade may be divided into two groups: first, there must be the will to trade, the initiative or driving force creating trade; secondly, there must be some means of obtaining a thorough knowledge of market conditions, of transferring commodities from the manufacturer at home to the importer abroad, of financing the transaction and, in fact, of performing all the auxiliary functions required, if the desired trade is to take place.

The major, the central function of the merchant and the one that distinguishes him from an agent, is bound up with the first of these, namely, the initiative. He acts independently and creates and controls trade. He may also perform any number of auxiliary services, but the distinguishing feature of a merchant is the exercise of the initiative. That is his prime function, and it has not altered very much throughout history. The changes which have taken place are rather in the manner in which he performs this function, in the range of other functions performed by him and in his general status in the commercial mechanism.

Until the early nineteenth century, it was scarcely necessary to make this distinction between the initiative and the auxiliary services. Both sets of functions were performed by merchants, who were often themselves manufacturers, shippers and bankers as well as merchants. During the course of the nineteenth century, however, there grew up a body of specialists who performed all the auxiliary services required by traders and this had a profound influence on the merchant's position. He could utilise their services for a small payment and so did not need to sink capital in ships, warehouses and so on. To-day, many merchants still perform certain of these services; large firms generally deal with their own forwarding,

some finance trade exclusively with their own capital, some have their own insurance schemes and some own ships.[1] Such cases however are becoming increasingly rare and for the most part, merchants now use, for part or all of their trade, the services of banks, shipping companies, underwriters, advertising agents and others. The merchant may still retain control of the trade he has initiated but he employs other people to perform the auxiliary services.

This development has given smaller merchants a chance of competing economically with larger ones. In fact, as each stage in the commercial mechanism has become more complex, only very large merchants have the staff and capital necessary to provide all the facilities needed. Merchants have, therefore, abandoned these functions partially or wholly and can thus devote more attention to whichever market appears to offer the best prospects. They can trade more extensively and they can draw their supplies of merchandise from a wider area, because shipping and forwarding agents will transfer produce from any specified point to any market without the merchant even seeing the goods. At the same time, these circumstances have given to the merchant an important new function—his success now depends to a large degree on his skill in choosing, utilising and blending these specialist services to form the cheapest and most efficient distribution channel. It requires time and skill to find suitable specialists to perform each operation and many manufacturers and importers find this to be one of the merchant's most valuable services.

The development of specialists has assisted merchants in some directions but, at the same time, it has severely reduced their economic status. They no longer control, to the same extent, the channel through which trade passes. Manufacturers in Britain and importers abroad have so developed that they are now able to perform the merchant function and take the initiative in creating trade while employing agents, bankers and other specialists to carry it out. Industrial expansion in Britain and abroad was accompanied by the

[1]This is particularly the case with certain large firms trading with West Africa such as John Holts and the United Africa Company.

development of very large manufacturing units and very large importers. These large units have become export- and import-conscious; they recognise the value of trade to themselves, they work on a large enough scale to enable them to operate internationally and they have set about finding the best means of contacting each other.

There are several reasons for manufacturers and importers wishing to take the initiative in trade and these vary according to the type of commodity dealt in, the size of the manufacturer and the structure and organisation of the market. The type of product has a considerable influence on the distribution channel through which the product flows. In the sale of unbranded goods available at different prices and in different qualities from numerous sources of supply, there is ample scope for merchant trade. In trade in such products as cheap textiles, dried fish, unbranded soap, bolts, nuts and rivets, the customer has not become acquainted with the sources of supply since the goods are not branded; there is a wide range of types and qualities and many different producers so that the merchant can exercise his skill in choosing the cheapest source of supply and in finding goods just suited to the needs of his customer. Such products do not call for individual attention and salesmanship like speciality goods and the profit margin is generally too low to induce manufacturers to set up their own selling organisations abroad.

In the sale of unbranded goods which are standardised and available only from a limited number of well-known manufacturers there is less scope for merchant trade. In the buying of such products as cement and sulphate of copper there is no skill to be exercised in choosing sources of supply and products suited to customers' requirements and pockets. Importers and manufacturers can easily contact each other directly or through commission agents.

Another group of products not well adapted to sale by merchants, includes art and fashion goods, such as women's clothes and any sort of speciality in which personal taste is required. Generally, importers of such products prefer to take the initiative and to contact suppliers directly. Similarly, in

trade in products made to suit specialised requirements, particularly in the sale of machinery, electric cables, transformers and other industrial equipment made for some specific project, the scope for the merchant is restricted because the general merchant usually lacks the requisite technical knowledge. It is not merely a question of selling but of providing a technical service which most merchants are incapable of doing. It is, therefore, generally necessary for direct contact to be established between manufacturer and customer, in order that the former may build up an idea of the idiosyncrasies of the product required and in order that technical standards may be established to suit both. Merchant trade in such products is, therefore, restricted though not completely eliminated. The merchant may be retained to finance the transaction while technical liaison is established by means of technical representatives of the importer, manufacturer or both. In general, however, this type of product is not well adapted to sale by merchants.

A very large and very important group of products in Britain's trade includes all branded and proprietary consumer and producer goods. In this group, there has been a marked movement away from selling to independent merchants.[1] Products such as bicycles, motor cars, chocolates, biscuits, speciality toys and toilet preparations are coming more and more to be sold through commission agents, through manufacturers' own selling departments abroad and directly to the importer or his buying agent in Britain. The main reasons for more direct contact between manufacturers and importers in the sale of proprietary goods are five in number. First, the manufacturer who brands his produce has to take full responsibility for it. If the product is damaged the manufacturer's reputation and goodwill suffer ; for this reason many manufacturers are unwilling to allow the products to be sold by independent merchants whom they cannot control. Secondly, many manufacturers wish to follow a policy of fixing prices to the consumer and profit margins for the middleman so that

[1]This, of course, only applies to manufacturers' brands not to merchants' brands.

a branded product is the same price everywhere within one market. If such a policy is not pursued it may lead to dissatisfaction when customers pay different prices for the same product and it may lead them to cast doubts on the uniformity of the product's quality. The essence of old time merchanting, however, was that the merchant bought as cheaply as possible and sold at the highest price and he speculated in stockholding. Such activity is incompatible with fixed prices and fixed profit margins. This policy on the part of manufacturers has weakened the incentive for the merchant to hold stocks and has deprived him of his ability to vary prices. Thirdly, if a commodity is branded, the source of supply is known to the consumer. He knows the price of the goods and their quality, and all other aspects of exporting could be handled by agents or by the manufacturer and importer. Since this is so, many importers are unwilling to pay a merchant, preferring to take the initiative themselves. Fourthly, the very act of branding is an attempt by the manufacturer to use intensive selling methods and his efforts may be nullified if his product is sold by a general merchant dealing in vast numbers of competing lines. Under these circumstances no product receives individual attention and no forceful sales methods will be adopted for it. A manufacturer who is keen enough to brand his goods is, therefore, generally interested in organising their sale to ensure that they receive special attention. Fifthly, in the sale of branded mechanical goods the incentive to direct trade is strengthened by the need to supply customers with spares and a servicing organisation. So manufacturers selling branded products requiring replacements and maintenance have, generally, to appoint exclusive agents or, to set up their own selling organisation.

For one or more of the above reasons, manufacturers and importers have taken the initiative in trade in branded goods and this movement has become so widespread during the present century that it has affected all merchants. As a result, a great deal of trade has been lost to them. In order to keep up the level of their trade, most merchants are now forced to do part of their business buying brands specified by

customers and act as selling agents for proprietary goods. Even in West Africa, the chief remaining stronghold of the British merchant, merchants have selling agreements with manufacturers. Under these, the merchant makes his original choice of a source of supply and ties himself to that source for a specified period. He cannot change his supplier while the agreement lasts and the price of the commodity is frequently, though not always, determined by the manufacturer; but otherwise, the merchant acts freely and independently and he has the advantage of being protected from competition, since other merchants and agents cannot sell the same brand in his territory.

The type of commodity is one factor determining the distribution channel through which trade flows. Another factor is the size of the manufacturer. If a manufacturer is small and lacks financial resources he generally prefers to leave exporting to merchants. Sales of his goods in any one market are too small and irregular to cover the overhead costs involved in establishing and operating a selling organisation of his own. Many small manufacturers are content to leave their export trade permanently in the hands of merchants. Others who expect their trade to expand make short term agreements with merchants giving them exclusive rights to sell a branded product for a specified period. When goodwill has been built up for the trade mark and the volume of trade has increased and the agreement has terminated, the manufacturer may set up his own selling organisation.

The other major factor influencing the extent and character of merchant trade and the degree of competition from direct trade, is the nature and organisation of the market. Some markets can best be contacted by merchants, some by manufacturers' agents, some by selling organisations and factories abroad and in other cases, by the importer taking the initiative and contacting manufacturers in Britain.

The greatest scope for the merchant is in handling small lots of a large number of goods and in exploring and opening up new markets. Irregularity of demand and small orders for one product are not obstacles to him. He combines many

small orders into one big one so that a steady flow of trade passes through his hands. In small, scattered and disorganised markets, commercial, financial and communications facilities are not usually well developed. Importers cannot be relied on to keep contracts, their orders are small and they need credit to enable them to sell goods before they pay for them because they have little capital. Poor transport facilities restrict the area of trade and slow up the movement of goods. In such markets, the provision of credit and willingness to undertake risks are two of the greatest services a merchant can offer. Manufacturers could not economically set up a selling organisation in such a market because their overheads would be high, while the volume of demand for any one line is small and irregular. In such markets, even very large organisations, such as I.C.I., sell through merchants.

These are the market conditions under which it has been found that merchant trade survives best. If these conditions are not present, the manufacturer or the importer generally take the initiative. A manufacturer may contact a market by employing agents to collect orders and send them through to him to be fulfilled, he may set up his own selling organisation abroad or he may establish factories abroad. In general, agents are most useful in fairly well organised medium-sized markets. Agents offer a specialised knowledge of a market for a small commission, they relieve the manufacturer of the technicalities of exporting but, at the same time, enable him to retain control over his goods. Improved communications make it easy for representatives of the firm to visit agents and to supervise the selling of their goods. This extra control over marketing leads to the widespread use of commission agents for selling branded and proprietary goods when the market is not large enough to warrant the establishment of a manufacturer's selling organisation. This, of course, applies only to commission agents not to the exclusive selling agreements made with merchants, whereby the merchant is left to organise and control the trade provided he does not deal in competing lines. In addition, many manufacturers say that the agent's commission is less than the merchant's profit so products will be

cheaper to the consumer if agents are employed. This is a particularly important consideration in very competitive markets and it may be responsible, to a large extent, for the great increase in agency work since 1900. From that date, competition in world markets has been extremely severe. The U.S.A. and Germany were especially keen rivals of Britain and they both made big inroads into Britain's trade relying on agents and direct trading methods.

The manufacturer's selling organisation abroad is mainly found in very large, highly organised markets. The demand for a manufacturer's product must be large and fairly steady if the high overhead costs of such an organisation are to be covered. The advantages lie, not so much in reducing selling costs as in giving the manufacturer control over the sale of his goods and in allowing him to obtain first hand knowledge of market conditions. The opportunity of studying the market is constantly given by large firms as a main reason for exporting through their own selling organisations.

Another way in which a manufacturer may contact his market, is by establishing a factory abroad but this is only practicable if there is a large, steady demand for his goods. If demand is large and steady, manufacturers say that they gain several advantages from producing abroad ; most obviously they can avoid high tariffs and prohibitions which put imported goods at a disadvantage or stop their import altogether ; they save time, work and expense in transporting the produce from the U.K., turnover is quicker, packing easier and the producing unit is in close contact with its market. Production costs may also be reduced if the work is of such a nature that cheap native labour can be utilised. This, as one might expect, has proved to be an advantage to manufacturers who have established factories in countries such as West Africa.

We are now moving rapidly away from all conditions which in the eighteenth century made the Liverpool export merchant so predominant in trade. Yet in spite of modern methods and in spite of great changes in the merchants' functions as a result of these methods, the essential mobility of the merchant which in the eighteenth century carried

his capital into the opening up of so many avenues of trade, still to some extent remains. The greatest threat of all to the merchant must always be when manufacturer and importer combine against him, or, when government policy tends to reduce his functions to a minimum. Bulk purchase schemes very often have the latter effect. In spite of this, some merchants trade profitably in goods subject to bulk buying by contacting risky markets and this, in itself, forces the merchant to give wide powers of choice to his agent and very often to assume to himself many of the old merchanting activities.

Consider now the effect of encroachments on the initiative of the merchant by importers sending orders directly to the manufacturer and by setting up buying organisations in the U.K., or by sending buying representatives over here periodically or by employing buying agents. Such an importer is generally well established and has good financial backing so that mutual confidence may be created between himself and the manufacturer and as a result of this mutual confidence satisfactory arrangements can be readily made for financing the transactions. Some of these importers are wholesalers, some are large retail stores, others are associations and groups engaged in bulk buying. The main advantage arising from this kind of trade is a reduction in price owing to the elimination of the middleman's profit. One firm estimates that, by sending a buyer over here to deal directly with manufacturers, the price of the goods to the importer is reduced by 10% compared with the price he would have to pay a merchant. In the case of fashion goods, many foreign retail stores have now cut out the services of the merchant by sending representatives abroad to get exclusive lines quickly and to maintain a more personal contact with fashion houses in order to keep abreast of rapid changes in a highly volatile market.

The effects of types of commodities and markets in determining the distribution channels through which trade flows, can be illustrated by an examination of conditions in three markets. The U.S.A. was, in the late eighteenth and early nineteenth centuries, a very important market for Liverpool

merchants. Now, they have few dealings with it as merchants, only as agents. The size of the market, the closely integrated commercial organisation together with the highly industrialised structure of the country and protective tariffs have combined to operate against the merchant. From the very nature of the market, it is only suitable for a restricted range of speciality goods where price is a secondary consideration. Aggressive selling tactics have to be adopted by firms selling their own produce while speciality goods are generally sold through agents or manufacturers' selling organisations. In addition, the high tariff has encouraged the establishment of British factories in the U.S.A.

In Central and South America, Liverpool merchants have also lost a great deal of ground. During the nineteenth century, British merchants were very active in developing markets in this part of the world, providing capital and goods, building railways and financing trade. As a result, Britain gained supremacy in trade with countries such as Brazil and Argentina. From the point of view of the merchant to-day, the organisation of South American markets contains many similar inhibitions to trade as those found in the U.S. market—namely, high tariffs, intense local competition and the confining of demand to a narrow range of high class, speciality products. Added to these difficulties, however, are the peculiar currency restrictions and trade barriers, active competition from U.S. traders and the growing tendency towards direct buying on the part of large retail stores. Only in the smaller, more backward states have merchants succeeded in holding their ground.

The best example of a merchant market is West Africa. Liverpool merchants have had trading connections with this market since the seventeenth century, and conditions there still favour the merchant. The market is still relatively undeveloped, its banking and communications facilities are comparatively poor and its native importers are, on the whole, small and in need of long credit terms. The natives' buying habits and custom of haggling over prices are not conducive to direct selling by agents and manufacturers on a fixed price basis. Demand, though growing rapidly, is not yet sufficiently

large and steady to support a general development of manufacturers' selling departments. The market is not highly developed industrially and requires a very wide variety of cheap consumer goods. West African trade is, therefore, suitable for all the diverse forms of merchant activity. This fact holds good even though most of the trade is concentrated in the hands of a few large merchant firms such as the United Africa Company and John Holts because these large firms have to conduct business very largely in accordance with accepted merchant practice. They operate their own ships and banking facilities and have branch houses and stores throughout the market. Nevertheless, although these merchants have a strong hold on West African trade, even they have succumbed to the influence of manufacturers' trade marks and have exclusive selling arrangements with manufacturers of proprietary goods. These arrangements however do not generally operate on a fixed price basis.

To sum up, the export merchant no longer dominates trade as he did in the past. The initiative in trading, so long his exclusive function, is now perforce shared by the manufacturer or the importer, depending on the type of commodity, the size and organisation of the market and the size of the manufacturer; while the auxiliary functions can be performed by the merchant, manufacturer or importer or by specialist firms and agents. But although the export merchant's economic status has been severely reduced as a result, he still plays a very important role in international trade, in dealing with small, hazardous and undeveloped markets and in linking together small manufacturers and importers. The Liverpool merchant may have had many of his economic activities changed by force of circumstances during the past 200 years; but it is no overstatement that he still retains many forms of function which his ancestors in the eighteenth century cherished, and which he himself, to-day, must regard as vital to the successful conduct of his trade.

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Trade Unions, Differentials and the Levelling of Wages

I.

A remarkable feature of the British wage situation since 1939 has been—as the language of industrial negotiations has it—"the narrowing of differentials." In 1951, the difference between average earnings in the lowest- and highest-paid industries was much smaller proportionately than in 1938. Over the same period the wages of women and juveniles have greatly improved in relation to those of adult men. The economic advantage of non-manual over manual workers has in general diminished and in some instances disappeared. In individual industries, relative differences in pay between workers of different grades have dwindled and local variations in wage-rates narrowed. From whatever viewpoint it is considered, the wage-structure seems, in the Britain of full employment and rising wages, to have been under some powerful compression.

The decline in skill differentials has commanded most attention. Between 1949 and 1951, indeed, there were several minor revolts of the skilled (or better-paid) workmen against the worsening of their position in relation to others. Such things were important features of the prolonged wage-disputes in the engineering trades, of the protracted and difficult negotiations in the railways and railway workshops, of wage-adjustments in the steel industry, and of the events which culminated in the London printing stoppage of 1950; while in certain civil service arbitration cases of the period unions claimed that an actual reversal of their members' status had occurred.[1] To some extent these protests—and particularly the last—embodied a reaction against the policy, adopted by some employers and arbitrators at the time, and encouraged by government and T.U.C. statements, of giving preference to lower-paid workers in wage increases. Studies of the movement of relative wage-rates in several industries, however, confirm

[1]See, for instance, *Civil Service Arbitration Tribunal, report on Award* 144.

the existence of a strong trend for the proportionate advantage of skilled over less skilled workers to diminish over the whole period since 1939. Nor, despite its recent impact, does this present an entirely new problem. The 1917 Commission on Labour Unrest selected "a disturbance of the proportion between the wages of skilled and unskilled men" as a major element in its subject : the Ministry of Labour reported it as a continuing [1] cause of industrial trouble in 1926.

There are several explanations of this trend. The first, and most obvious, concerns the different incidence of unemployment on various classes of workers. It would suggest that since in the inter-war period—when relative differentials widened somewhat—unemployment was much greater among the unskilled than the skilled, the subsequent "narrowing" reflects the strengthening of the lower-paid workers' bargaining position by prosperity and a high demand for labour. It is not apparently possible, however, to establish any very direct connection between the movement of unemployment percentages in Great Britain and of relative wage-differentials.[2] Moreover, while the fall in unemployment among labourers was necessarily spectacular, it is equally true that in the era of general labour shortage from 1940 onwards the scarcity of skilled workers of most kinds was much more intense than the general deficiency of hands. That the *relative* bargaining strength of the skilled worker has been reduced by full employment remains to be proved. Yet the "narrowing of differentials" has proceeded apace.

[1] K. G. J. C. Knowles and D. G. Robertson ("Differences between the Wages of Skilled and Unskilled Workers, 1880-1950." *Bulletin* Oxford Institute of Statistics, April, 1951) consider that the trend has been at work since 1914. They observe that in certain industries unskilled workers' rates of pay, which were fairly stable at between one-half and two-thirds of the rates paid to related classes of tradesmen for the whole period 1880-1914, increased to between 75% and 80% of the skilled workers' rates in the First World War, and after receding to a rather lower proportion (60% to 75%) in the inter-War period, increased again in the Second War until a labourer's rate of 75% to 85% of the craftsman's is now normal, and one of 90% not uncommon. (The condition's first symptoms, indeed, may have ante-dated the First World War : they had certainly appeared among railwaymen in the years immediately before that outbreak).

[2] See Knowles and Robertson, as cited above.

Then there is the effect of technical development. It is sometimes said that the "narrowing" trend reflects changes in industrial technique, which reduce the standard of skill required of craftsmen at the same time as they promote numbers of former labourers to semi-skilled work. This argument is often strongly coloured by experience of labour-saving rationalisation in the 'Thirties (Chaplin's *Modern Times* and so on) or of some displaced traditional craft. Whether technical progress narrows the *range* of skill required is at least doubtful : while it raises the minimum level of technical proficiency demanded of workers, it also creates new and superior skills. But its effect on established individual crafts is in any case uneven : some it undermines ; others it elaborates.[1] So far as its effect on wages is concerned, however, the decline of differentials is quite as marked in trades where technique has remained relatively unchanged—and notably in building—as in others, such as engineering, which have undergone a major technical revolution. While cases also exist where the "narrowing" has been delayed despite changes in practice which have reduced the responsibility of the higher-paid.

Thirdly, there is the impact of greater social democracy. But the growth of egalitarian ideas alone is not an adequate explanation of the "narrowing" : these have certainly not been shared by major parties to the wage-settlements through which it has developed—private employers of labour, for instance, or, in practice, by *all* the skilled workers whose status has declined in consequence of it. Nor is the widening of educational opportunity a sufficient answer to the problem. This might account in broad terms for the decline in the advantage of non-manual over manual workers—though the latter's superior union organisation must also be reckoned with there. But it would explain nothing of the "narrowing of differentials" among manual workers themselves. So far as their general education goes, these always started from

[1]The metal and woodworking trades are especially fruitful of such contrasts. The mass-production of metal goods has been mainly permitted by transferring to machinery the former productive task of the sheet-metal worker. At the same time the patternmaker has been called on to master an increasing complexity.

scratch. But the craft training which once gave the skilled man his title to better pay is received after entry into the trade. In certain cases, full employment and the growth in the unions' power have strengthened the hold of the better-paid on apprenticeship facilities. Even there, however, the "narrowing" has advanced.

None of these factors, therefore, provide a complete explanation of the process, though they must no doubt be reckoned in its general background. Messrs. Knowles and Robertson,[1] however, seem to have come closest to its detailed mechanics. These writers have remarked a close correlation between the movement of differentials in several industries and that of the general price level. Here unskilled workers' rates increased relative to those of the skilled when the cost of living was rising and declined in those less common times when it was falling. By their account, the "narrowing" process develops somewhat after this fashion : when prices rise, unions claim wage increases to maintain real wages. Employers often meet these demands by "cost-of-living" bonuses, which usually take the form of a cash increase equal in amount for all employees, irrespective of grade. A reduction in *relative* differences in pay naturally follows from the form of these concessions.

It may be as well, at this point, to make clear a simple but vital distinction. Wage-movements which change the rates of both skilled and unskilled by the same cash amounts are called "flat-rate" movements. While changes which effect increases or decreases in proportion to the existing pay of different grades are usually called "percentage" movements. Differentials between grades can, of course, be measured in correspondingly different ways—either as the cash margin of one group's rates over another's, or by the proportion which the pay of one class bears to that of others. Academic and public discussion of the differentials problem has mainly dealt with the proportionate or percentage movement of these "relativities." And to this the "narrowing of differentials" refers. But, as I hope will emerge, in industrial practice the cash differences may be of equal or greater significance.

[1] *op. cit.*

The system of increasing wages by flat-rate additions is (to resume the argument) certainly widespread. In 1951, for instance, very few workers failed to secure substantial increases in pay. Where collective agreements cover several classes of operatives, the majority of workers received flat-rate increases. It included employees in engineering, chemicals, building, furnishing, clothing, boot and shoe, gas and electricity, road haulage, most sections of distribution and catering, textile finishing and hosiery, and manual or "manipulative" employees of the post office, local authorities, and health services. The main industries in which higher-paid workers received larger cash increases than lower-paid were mining, railways and road passenger transport, printing, iron and steel, and textile manufacture.[1] Moreover, the form of the latter increases departed in several cases from previous practice, under pressure of that "revolt of the higher-paid" already noted. Certainly, the movements in steel, printing, and the railways were in part designed to adjust the balance : in each case, however, changes in national rates in preceding years had mainly been of the "flat" variety, while in steel and printing other increases were also made in 1951 which resumed that form.

But the predominance of flat-rate increases still requires explanation. The trade unions of skilled workers are strong in many of the industries where the practice is established : their degree of organisation in general certainly exceeds that among the unskilled. There is no very obvious reason why they should have accepted for so long a system which has so reduced the relative status of their members and the consequences of which have occasioned, in recent years, such resentment. Moreover, in no significant instance in 1951 was the form of the increase in rates dictated by *employers*. Certain of these increases—in building, in boot and shoe, in hosiery, and in iron and steel, for instance—were made in accordance with established "cost-of-living" agreements providing for automatic flat-rate adjustments in wages. New agreements on the same lines were adopted in printing and furnishing. But nearly

[1]See particularly, "Wages, Retail Prices, Disputes, etc., in 1951" : *Ministry of Labour Gazette*, January, 1952.

every increase secured by direct bargaining followed the *form* demanded by the unions.

To explain the levelling of wages, therefore, one must first explain the partiality of unions for the flat-rate form of wage demand. The attitudes of trade unions to wage-movements which affect—as all do—the differences between workers' pay is, indeed, an important clue to the sources of union wage policy. These attitudes, this essay proposes to examine. But since to do so it must explore union policies fairly widely, its last section will, in summarising its argument, also refer to some general implications which arise from its central theme.

II.

It is perhaps more than a coincidence that the "narrowing of differentials" began [1] roughly at the same time as the extension of trades unionism to all sections of employed people. In 1910, only one in six of manual workers was a union member. The coverage of collective agreements, at a level above individual firms, was similar. The membership of labourers' unions was less than 100,000. By the end of the following decade union membership had more than trebled to a high point of 8,300,000. "Industrial" and "General Unionism" were established forms of labour organisation.[2] Great new amalgamations and federations of unions had appeared. There had been an immense development in negotiating machinery.

These years were especially prolific of agreements which brought workers in different areas, crafts, and grades of employment into a single, comprehensive bargain. What is especially

[1] See footnote [1] on page 228.

[2] Here, and elsewhere in this paper, I use conventional descriptions of forms of union organisation. Thus, a "craft union" is one which recruits only workers of a particular occupation or related group of occupations—usually distinguished by apprenticeship or a similar controlled training—but does so without regard to the industry in which they are employed. (Of course, some crafts are confined to particular industries). An "industrial union" is one which seeks to organise *all* the workers—irrespective of occupation—in a particular industry only. While a "general union" is one which in principle will organise workers of any occupation in any industry (in practice, "general unionism" is based on the less skilled). The adequacy of these terms as descriptions of union forms is very questionable, and I shall later use the terms "vertical" and "horizontal unionism" to supplement them. They have, however, a clear meaning as indicating the general lines on which existing unions have expanded.

significant about many of these "national" agreements [1] is that they often seem to have involved a certain "freezing" of differentials between the workers they covered. This quality may be illustrated by two of the most important national agreements of the period—those of the building and engineering industries.

Take first the building industry's treatment of "local differentials." The National Federation of Building Trades Operatives (N.F.B.T.O.) was formed in 1918 : its foundation was shortly followed by the establishment of central negotiating machinery, and by general improvements in conditions of work. The new National Wages and Conditions Council of the Building Industry went on to devise a "grading" scheme ostensibly designed to produce some uniformity between local wages. It nevertheless provided for seventeen different local rates for craftsmen.

This embodiment of a variety of local rates in a central agreement seems to represent a departure from earlier union negotiating practice. Nineteenth-century general agreements were by-and-large restricted to certain piece-working trades : the great craft amalgamations, which occupied so central a place in the labour scene of the century's second half, were seldom concerned with wage-fixing above the district level. The regulation of piece-work prices by "lists," however, was an important purpose of several smaller unions of traditional craftsmen, and among these, the standardisation of rates appeared a prime aim of policy. According to the Webbs, such unions—the flint-glass makers, for instance—sometimes demanded from their more fortunate members the sacrifice of part of their wage to facilitate the acceptance of uniform price-lists by employers. Certain of these societies had succeeded in establishing standard rates for the whole area of their respective trades. It is possible that these policies were aimed at preventing "undercutting" of one area by another in manufactures in which labour costs bulked large. A similar motive was at least important in the pursuit of uniform price-lists by the Lancashire cotton-operatives, who gave the Webbs

[1] The American term "industry-wide" is perhaps more expressive of their scope.

the major illustration, in factory employment, of their thesis that "The Standard Rate" was a principal object of trade union policy. No such pressure towards uniformity, however, was evident among the skilled men of the building trades at the time of the Webbs' enquiries.[1] There is indeed a note of asperity in their account of the "apathetic" attitude of leaders of the great woodworkers' union to the existence of twenty rates for their craft in the British Isles. It seems very probable, therefore, that the builders' grading scheme of 1922 represented little more than a formal tabulation of the rates actually operating in the separate areas at the time.[2]

The engineering agreement of 1917 may here be taken as instancing not merely the freezing of local differentials but, more important, of differentials for skill. Up to 1917, the rate for each class of engineering worker had been determined locally, often by separate unions. In that year, however, the various unions of engineering operatives, acting in concert [3] negotiated a national agreement. This suspended separate district claims, and provided for subsequent wage changes to be dealt with centrally. At one stage in later negotiations a return to district wage claims was threatened but not implemented, and in 1937 it was formally agreed that district wage claims should only be made where a local rate was exceptionally low : few changes appear to have been made under this clause, however.

What the engineering procedure especially illustrates is a general technique of evading—or at least, forestalling for

[1]Evidence of the character of collective agreements at that time is, of course, to be found in their chapter "The Standard Rate," in *Industrial Democracy*.

[2]The 1922 agreement also gave a single rate, in each area, to all the different classes of building craftsmen : with, however, exceptions in certain districts for which there is no other obvious explanation than that this part of the agreement, too, was a "rationalisation" (using that word in the psychologist's sense) of the situation then existant. The agreement also froze the skill differential—between craftsmen and labourers—on a percentage basis. The actual working of this clause, however, needs detailed analysis and will be referred to later in this essay.

[3]In this case, the Federation of Engineering and Shipbuilding Trades, acting in alliance with certain unions not affiliated to it, was the unions' instrument.

the moment—the whole issue of "relativities" in combined negotiations. The wage increases of 1917 and subsequent years were embodied in a "war bonus" common to all the workers affected. This later became (as "the National Bonus") the main vehicle of engineering wage changes and continued so until the agreement of November, 1950, modified its application. The detailed relations between local and craft rates were thus preserved.[1] This method by which national negotiations have been mainly concerned with only a part of the wage actually paid—with a "standard addition" or some similar sum or ratio by which the established sectional rates are varied—has been characteristic of a number of industries at one time and another, including mining and shipbuilding : in essence, it continues in iron and steel and (so far as voluntary agreements are concerned) the clothing trade.

But whether the engineering method of dealing with the differentials question by ignoring it be adopted, or the building system of "rationalising" current relativities into the new wages structure, the effect is the same : to set as the implicit basis for national negotiation the relativities existing at its initiation.[2] Public concern is mainly with the reward of skill ; local variations in wage rates would seem both less important and less susceptible of rational analysis. Nevertheless the discussion of local and skill differentials cannot be altogether separated. Their persistence often has a common root.

[1]The rates of certain smaller groups of craftsmen have never been tied to those of the fitters, turners, and labourers around which national negotiations revolve, while the growing class of semi-skilled usually lack even district agreements on rates. Their unions nevertheless participate in the negotiations of the National Bonus, but they also retain a certain freedom of local and workshop negotiation which is a frequent and continuing cause of anomalies, and will continue so until the (much-delayed) revision of the industry's wages-structure.

[2]Even the famous "Uniform List" which the cotton weavers established in 1892 in fact does not seem to have gone much further, its title notwithstanding. Its piece-price for each sort of cloth was determined by a compromise between three existing local lists, and was in any case subject to local variation. The anomalies between weavers' wages which were so much a concern of the Moelwyn Hughes Commission of 1946-49 arose in large degree from the fact that each individual List price had been originally determined under the particular bargaining circumstances existing at the date of its first settlement and in the predominant centres of its manufacture.

In both building and engineering the inclusion of each industry's employees in single central bargains apparently entailed a certain crystallisation of the relations between workers both in different classes and in different areas. It is this phenomenon that first requires interpretation.

One explanation suggests itself. When separate groups of organised workers combine to negotiate with a single employer or employers' association it is necessary, if only by implication, for them to come to some agreement between themselves. Class and political reasoning played its part in the argument of many leaders of that movement towards great national alliances and amalgamations of unions which reached its climax in the years immediately after the First World War. But what most obviously carried conviction to the generality of their members was the prospect these mergings of sectional identities offered of *general* improvements in wages and conditions superior to those which the separate groups could achieve alone. Their formation in any case always involved lengthy and difficult inter-union negotiations and diplomatic interchanges. It was clearly advisable for their leaders to confirm them by some success, and equally politic for them to accept the existing relation *between* rates as the line from which to launch their campaign. Some minor standardisation may have been envisaged on occasion, if only to facilitate central negotiation. But any great discussion of the relativities between the allied groups might not only have diverted their energies from the main ends of their co-operation but even endangered its continuance. Even if the alliance had rather to *defend* wages against threatened reductions (as was the case with the N.F.B.T.O., in its very early years) the *status quo* was the only generally acceptable basis of common action in defence. Certainly no united strategy could have been based on the assumption that disproportionate concessions might be given by one class of workers.

Here it can be incidentally noted that this crystallisation of each wage system is often reinforced by a further tendency, at least as regards distinctions between occupations, and sometimes even as between areas : that is, for a difference in

pay normally received to be supported by a demarcation in work done. Thus, and most obviously, the general difference in the pay of men and women is in most specific instances supported by the restriction of women to certain operations and by the preservation of others for men. In "demarcation" disputes between men of different trades, it is commonly found that a difference in the rates paid to the groups which present rival claims to a particular job is a major obstacle to agreement, but that where no difference in rates exists the allocation of work is a much easier process. The preservation of a particular rate of pay is often linked with a particular restriction in employment : the apprenticed vehicle-builders in the engineering industry are to be found, for instance, in early 1951 resisting an employers' argument that certain operations performed by their craft had become simple engineering jobs, because it would be implied thereby that they could be performed by fitters at a lower rate, although the employment on these operations of wood-workers, whose rate is the same as vehicle-builders, is not so generally objected to. The differential of the London Society of Compositors' members over the provincial printers of the Typographical Association is supported by restriction on the entry of workers and various controls over the import of provincial work into the London "radius."

III.

But the considerations which lead unions, at the inception of centralised bargaining, to take the differentials between their members as given are also present in some degree in all later negotiations. The first necessity of joint demands by separate unions or groups of workers seems to be a common formula, by which the terms in which a wage increase is sought must at least appear to apply equally to all. "Applications for wage increases," said the General Secretary of the National Union of Railwaymen (N.U.R.)—an industrial union which claims to organise all grades of railway employees—at a rally of its members in July, 1950, "should not be confined to lower or middle wage rates but be applicable to all workers. Any other policy would be absolutely, fundamentally wrong."

The need of union negotiators to secure the widest possible consent of the workers they represent compels them so to formulate their claims as to avoid any appearance of discrimination against a substantial section of their constituents. This necessity is most clearly marked when several trade unions organising different classes of workers are involved in a claim—a normal situation in British negotiations since there are here very few industries whose workers are organised into a single trade union. In such cases any settlement which appears to place the membership of one of the associated unions at a disadvantage as compared with the other groups puts a great strain upon the alliance and may lead to the withdrawal of the offended party. Thus the Associated Society of Locomotive Engineers and Firemen (A.S.L.E.F.), the craft union of railway footplate grades, refused in late 1949 either to be associated with an N.U.R. demand for a railway minimum wage of £5 a week or to accept Railway Executive offers of increases in the minima of lower-paid grades, and in 1950 it finally submitted a demand for a 15% increase in the pay of drivers, firemen and motormen only. Co-operation between all three unions of railway employees was only secured on the basis of a claim for a common percentage increase in all rates in the following year.

It seems, in fact, unusual for the numerous federations, joint committees, "workers' sides" and the like, which manual workers' unions form for negotiating purposes, to present their claims in any other form than for a straightforward flat or percentage addition to existing rates—at least for adult male workers.[1, 2] So, of the major wage-claims in 1951 which

[1]While in several recent cases (engineering and clothing) flat rate demands have been made for both men and women, the rates for female and juvenile workers will often be related, in union wage claims, by some set formula to the adult male rate—a connection in itself significant.

[2]Among "black-coated" workers, compromises between the flat-rate and the percentage form are, of course, common. The "blanket" agreement between the civil service unions and the Treasury of January, 1951, which gave increases of 10% on all pay up to £500 a year, 5% on pay between £500 and £1,000, and 2½% on pay between £1,000 and £1,500 illustrates the principle of these compromises. It is possible that the hierarchic structure of "black-coated" employment has conditioned unions operating in it to such, and more elaborate, formulae. But the way in which non-manual trades unionism has developed provides a stronger reason. This will be referred to later.

departed from the flat-rate principle, those in textiles and steel were also of the percentage type, while those in road passenger transport broadly followed a form derived (through London Transport) from the percentage increase in railwaymen's wages.[1]

This necessity to avoid alieniating any substantial group of workers affected by a proposed wage settlement applies equally, however, within any union which combines several grades of employee. It is illustrated strongly by the Wallpaper Workers' rejection, in 1951, of an employers' offer of a wage increase. This small union includes craftsmen, semi-skilled workers and labourers, though the craftsmen probably play the predominant part in the union's affairs. On this occasion it had claimed a general increase of 7½% in hourly wages and bigger overtime rates. The employers countered by offering an increase (in hourly rates only) of 7½% for craftsmen, 6¼% for semi-skilled workers, and 5% for labourers. So anxious was the union to secure a *standard* increase for all members that it offered to withdraw its demand for an increase in overtime rates and to give up the proferred special concession to craftsmen if the employers would instead grant an *all-round* increase of 6¼%. The labourers actually compose about one-fifth of the union membership, but it was felt by the union's Wages Commission that the employers' proposed discrimination in favour of the craftsmen would also be so resented by the more numerous semi-skilled as to make the offer unacceptable to the majority of the members—although it promised greater total benefits than those involved in the union's counter-suggestion.[2]

[1]The Railway Shopmen's National Council, apparently overwhelmed by the difficulty of reconciling the conflicting models offered by a percentage claim by railwaymen and a flat-rate claim by engineers, refrained from stating its demands in definite terms altogether, and merely requested "a substantial increase in wages" for railway workshops.

[2]This account is derived from a discussion with members of the union's Wages Commission. In the upshot the employers' offer was accepted, the opposition within the Wallpaper Workers' Union being overborne by the support of another union concerned—the Engravers'—whose members consist only of craftsmen.

Several industrial unions are in fact subject to a recurrent threat from "breakaway" organisations, which aim at representing groups of workers who believe their interests to have received insufficient consideration from the comprehensive body. The winding-enginemen in the mines : the association of railway signalman on the railways : the guild of telephonists and the association of technical officers in the Post Office : the organisation of aircraft mechanics in civil aviation—these are all warnings to union leaders of the danger to the solidarity of their organisations which arises if it appears to any section of their members that its interest is subordinated. Only when special circumstances have made it difficult for an aggrieved group to revolt against settlements negotiated on its behalf does the rule of parity of treatment appear to have been neglected by union leaderships.

A final factor making for the standard addition to rates as the normal form of wage demand is simple convenience. It is naturally easier for the national officials of unions to negotiate in terms of a straightforward general claim than in terms of one involving, for each of the many grades their agreements may cover, different adjustments and therefore separate argument. That consideration is, however, secondary to the need to maintain a solid bargaining front. In the rare situation (which certain wage movements in mining and printing during 1950 and 1951 seem to instance) where neither the flat-rate nor the percentage formula has proved acceptable, union leaders have negotiated—first between themselves and then with employers—elaborate claims as the only way to reconcile the sectional interests of their members.

But simplicity becomes a major consideration where the application of agreements depends on lay representatives at the place of work. In certain industries, and particularly in the metal-working trades, it is necessary for increases in rates which have been nationally-agreed to be interpreted in many piecework, bonus, and "lieu," etc. agreements at the factory level. Such workshop negotiations will be carried out by shop stewards, sometimes representing several different trade unions and grades of worker. These local arrangements again require

some simple method of adjusting the many and complex agreements which may exist in a single works, and which at the same time possesses that appearance of equity which is the necessary condition of collective action. The obvious way to satisfy these requirements is tacitly to accept the established differentials between the various workers employed, and to add a common sum to the basic rate of each class. The attempt made by the engineering agreement of November, 1950 to depart from this procedure—by "levelling up" only those workers whose standard earnings were below the new national minima—provoked widespread piecework and overtime bans by operatives.

IV.

The use of the flat-rate or the percentage formula for wage-demands avoids detailed controversy between the groups that co-operate in making them. But the choice between the two forms itself raises the question of relativities in general. The alternative ways by which equity's appearance may be preserved clearly have very different effects. Flat-rate advances in wages stabilise *cash* differentials and so reduce proportionate differences in pay. Percentage increases raise cash margins so as to maintain *relative* differences. Although individual trade unions have varied their policy between these two approaches from time to time, there are among unions in general definite preferences for one method or the other.

In several great industries these preferences have been so strong as, in effect, to maintain the initial freezing of differentials over long periods of time. In some cases—and notably in heavy steel and in cotton-spinning—it is the percentage relationship which has been frozen. Much more generally—and especially in the metal and woodworking trades—the cash differentials have become rigid. The practice normal to official and academic studies of comparing the movement of allied wage-rates in *proportionate* terms overlooks the constancy often remarkable in the cash differences between them. Here again, engineering provides an outstanding example. The average differential between the various engineering district

rates for labourers and fitters, for instance, was constant from 1926 to 1948 at 16/- per week, although rates nearly doubled in this period.[1] It seems probable, in fact, that this differential—which has an importance extending far beyond the great industry in which it is prescribed—was the same, in cash, in 1950 as in 1917.

The first claims made under engineering's national bargaining procedure of 1917 were for flat-rate increases to all classes of workers. Between that date and 1920, a series of flat-rate wage demands were made and (in form if not in amount) conceded. Although a percentage rise was also given to skilled timeworkers in 1917 and was later extended to all, these increases were withdrawn in the wage-cuts of 1921 and 1922 : other reductions of those years followed the flat-rate form.[2] Despite internicine disagreements or organisational principles, the engineering unions again joined in a common movement [3] for flat-rate pay increases from 1924 onwards, and the small changes in engineering rates from '27 to the Second World War, as well as the substantial increases which followed the latter's outbreak, were all in national flat-rate terms.

[1]See here Table III of "Earnings in Engineering," compiled also by K. G. J. C. Knowles and D. G. Robertson, from material of the Engineering and Allied Employers' National Federation. (*Bulletin*, Oxford Institute of Statistics, June, 1951).

[2]It is no part of this paper's purpose to examine the wage-policy of organised employers. So far as differentials are concerned, however, this would seem to be very secondary to the influence of unions. In periods of wage-reduction, it seems to have been very usual for employers to begin by withdrawing the last increases secured by unions, while employers' counter-offers to union claims rarely depart from the *form* of the latter. There were exceptions in 1950 and 1951, particularly in nationalised industries which were most influenced by government wage-policy. But in general employers seem reluctant to inflame feelings on the union side in negotiations by proposing also a disruption of conventional differentials.

[3]The largest engineering Union, the Amalgamated Society of Engineers, had withdrawn from the old engineers' Federation in 1918 to be free to promote direct amalgamation of Unions. Its successor, the Amalgamated Engineering Union, however, although it presented separate wage-claims on one or two occasions between the wars, in the main acted with the other unions in the industry through the Engineering Joint Trades Movement, a loose alliance which provided the main vehicle of inter-union co-operation until the present Confederation of Shipbuilding & Engineering Unions became representative of all thirty-seven unions concerned.

There is thus no obvious reason why cash differences between the rates of the forty-six engineering districts should have altered from 1917 to 1948, when a partial "levelling-up" was made. While the major skill differential was fixed, again in terms of cash, from the beginning of national negotiations until it was deliberately widened by agreement in 1950. Certain minor skill differentials in the engineering industry have also remained constant over long periods : the rate for woodworking craftsmen was fixed at 1d. an hour above the local fitters' rate by national agreements of 1920 and 1922 and has not been changed to the present day : while that for electricians is regulated in a similar way.

The building industry portrays a situation in which another key differential, originally frozen on a percentage basis, has, as a result of internal union pressures, been converted to a flat-rate margin. The operatives of the building trade consist in about equal numbers of skilled tradesmen and labourers. The former belong to a group of craft unions : the unskilled workers are mainly organised by the two great general unions—the Transport & General Workers' Union and the National Union of General & Municipal Workers. All the unions concerned are affiliated to the N.F.B.T.O. In the year of this Federation's agreement on standard rates for craftsmen, an agreement regulating labourers' rates was also reached. These, which had approached very closely to the craftsmen's in 1920 and 1921, were fixed at 75% of the latters'. The regulation was proposed by the employers [1] and probably represented a return to the normal practice of the trade before the First World War and the spread of unionism among the unskilled : the rule, however, was confirmed by an arbitration award, which the unions accepted, in 1923. In fact, over the period of the rule's nominal operation craftsmen's rates were changed twenty-five times : on only seven occasions, however, did the cash differential between the labourers' rate and the

[1] For reasons which are implicit in later argument of this study, it might often advantage employers to reverse the form of differential selected by the unions. The riposte is rarely used, however. Employers' Associations seem more concerned with the total wage-bill of their members than the relative prices of different grades of labour.

craftsmen's change. From July, 1937 to April, 1943, when the craft rate was increased eight times, the cash differential was virtually a fixed sum. The building unions, therefore, although subscribing in principle to fixed *proportionate* relations between grades were in fact yielding to pressures to maintain fixed *cash* differences. On occasions during the Second World War, indeed, the 75% rule was deliberately suspended, and in 1945 it was revised. The nature of the problem was not at first clearly appreciated, however. Throughout the rule's existence, the labourer's rate had been in fact nearer 80% than 75% of the craftsman's.[1] The rule was amended to *fix* the labourer's rate at this proportion. In consequence the cash differential widened sharply in 1946 and 1947. Protests from the labourers' unions forced a further revision, and in 1949 it was the principle of the fixed *cash* differential that was accepted, and the margin between the craftsmen and labourer was permanently established at 5½d. per hour. Since that time wage claims in the building trade have been made in flat-rate terms for both classes.

Now clearly, the consistent pursuit by unions of anything less than a full percentage relationship between skilled and unskilled workers' wages will, over a period of wage-advance, lead to the "narrowing of differentials." To any understanding of that process, therefore, the reasons for unions' choice of one formula rather than the other are fundamental.

V.

What explains this strong attachment of many union groups to a particular form of wage-demand? One factor is undoubtedly the "balance of power" between the different classes of worker within these combinations. A preference for flat-rate claims is generally marked where the lower-paid sections of workers are powerfully organised, and particularly so in industries where the skilled and the unskilled belong to separate trade unions which negotiate jointly with employers.

[1]References to relative differentials in this paragraph are based on the craftsman's "A" rate, which is currently the median of the separate local craft rates of the builders' grading agreement.

The unions in the cotton textile trades provide an illuminating example here. Although the various cotton unions belong to a common federation which deals with the employers on certain general matters, like hours of work and holidays, they divide into two groups for wage-negotiation. One covers workers on the preparatory and spinning side of the industry, the other—the Northern Counties Textile Trades Federation—embraces the manufacturing section. In December 1950, the two spinning unions, the Cardroom Amalgamation and the Operative Cotton Spinners, demanded a wage increase of 15%, while the nine manufacturing unions requested a general advance of £1 a week in all rates. Both the spinning unions are dominated by a relatively small group of skilled men. The operatives who make up the greater part of the Cardroom Amalgamation's members—tenters, ring-spinners, etc.—are women : their union is largely run by the skilled male workers, and the union's officials are all men. The Operative Cotton Spinners is an all-male union : its core consists of the skilled mule-spinners : their assistants also belong to the union, but for various reasons have had a very restricted influence in its affairs. The situation of the manufacturing unions is very different. The specialist male workers, like the overlookers, tape-sizers and so on, are separately organised in a number of small "closed" unions. The major class of machine operatives, the weavers, belongs, together with numbers of winders, reelers and the like, to the Weavers' Amalgamation, which is overwhelming the largest union in the Northern Counties Federation. In 1950 it was the Weavers' Amalgamation which first proposed to the latter body that a flat-rate increase be sought. Thus, to put the matter shortly, the spinning unions are dominated by the higher grades of worker : while the weightier influence on the manufacturing side is the union of "rank-and-file"

operatives. This alone is sufficient to account for the difference in wage policy between the two sections.[1]

The same sort of "balance of power" situation is also often seen within industrial unions where the lower grades of worker are strongly represented. Thus the N.U.R. on four occasions between 1947 and 1949, submitted to the Railway Executive claims for flat-rate increases for all grades, while the various moves for flat-rate advances in the engineering industry in the years since the Second World War have nearly all been initiated by the Amalgamated Engineering Union (A.E.U.). But in the broader union alliances the impact of power-politics is sometimes supported by the effect of institutional forms. The constitutional procedure of such federations as the Confederation of Shipbuilding and Engineering Unions (C.S.E.U.) and the N.F.B.T.O. often strengthens the tendency to flat-rate claims. "Block" or ballot voting on major issues rarely gives such satisfactory results as inter-union negotiation and compromise : its existence as a last resort is nevertheless an important influence on policy. Its effect, however, is to give organisations of unskilled workers an influence, which if proportionate to their membership, is more than proportionate to the *quality* of their organisation as compared with that of the craftsmen. It seems, for instance, that the renewal, in early 1951, of the "payment by results" agreement in the building trade, after a ballot vote of union members, was carried mainly by the votes of the labourers (whose attachment to both the industry and their unions is rather unstable) and

[1]While the cotton spinning and manufacturing unions have in recent years broadly favoured percentage and flat-rate claims respectively, these preferences are not always reflected in the actual increases secured because of a tendency for the two sections of the industry to march in step, probably arising from an overlap between them in "vertical" firms, and between the parallel employers' associations. In recent wage-movements, the spinners have usually led the dance, so that on at least one occasion the weavers have had to accept a percentage rise because one had already been secured by the spinners. Some inter-union recrimination has resulted. (The pre-war percentage movements in weavers' wages affected that class of manufacturing operatives only, so that no question of inter-grade differentials arose. The percentage form was then adopted as the most convenient method of changing piece-price lists).

of the bricklayers : in other unions of building craftsmen the voting was against the system.

The influence of the unskilled in unions and union federations is not, however, a sufficient explanation of the flat-rate movement's predominance. In the last analysis, the skilled workers can always break away and attempt to negotiate for themselves. Problems of securing recognition by employers make this difficult when they belong to an industrial union, but that obstacle is not great if they already have an independent and established union of their own. In some industries, the craft unions have always preferred to bargain independently of the less skilled workers, and in periods of wage-reduction alliances of unions have on occasion broken up because certain groups' greater powers of resistance made them prefer to fight by themselves. Such a fate overtook the alliance of printing unions in the 'Twenties, for instance. More recently, and after government-inspired concessions to lower-paid workers had capped the effect on differentials of a long (and steep) series of flat-rate movements, many union groups diverged from their customary policies to give their skilled members some compensation. There is no doubt, for example, that the N.U.R.'s switch to a percentage claim in 1950 was at least partly determined by the reception accorded by such higher grades among its members as signalmen to the union's previous acceptance of the Railway Executive's proffered increases for the lower grades only. The cotton manufacturing unions also swung to a percentage demand in 1951, and other examples of deviations from accustomed paths during the break-up of the official "wage-freeze" have already been noted. But nothing of the kind occurred in the engineers' and woodworkers' unions. Both the C.S.E.U. and the N.F.B.T.O. stood by the habitual form of their demands, and flat-rate claims continued throughout many important trades—like

shipbuilding and furniture—which are linked to the engineering and building industries.[1]

Two further things account for the extraordinary persistence of the flat-rate form in certain trades. One is the impact of "market" considerations on union policy. It is true that among craftsmen (and particularly in the building trades where skilled men and labourers work in close co-operation) one meets the argument that the labourer needs as much to live on as any other man and is just as essential to industry nearly as often as the opposite one that skill and responsibility demand an adequate incentive. A more material factor, however, is probably the craftsman's fear of undercutting by the unskilled worker. This may take several forms—from the use of unqualified men on work regarded as skilled (at one time a common cause of trouble in building) to the encouragement which the availability of cheap labour as machine-minders gives to the mechanisation of craft processes. Where such a danger exists, it is not to the craftsmen's deeper interest to maintain too wide a gap between their rates and those of the unskilled. The unskilled workers, on the other hand, have no contrary inhibitions such as would lead them to refuse either the jobs of the craftsmen [2] if offered, or the increase in relative wages which might deny them those jobs. Their unions can expect to have no such control over employment as the craft unions seek to exert, and are therefore less concerned to co-ordinate the wage and employment aspects of their policies.

The second factor is the influence of the expansionist ambitions of many great unions on the form of their wage-demands. It has been said that in no major British industry

[1] True, the tradesmen's leaders made great play, in the negotiations which preceded the engineering agreement of November, 1950, with the decline in the skilled man's relative standing. It is very probable that this led the employers' federation to conclude that it could satisfy the C.S.E.U.'s original demand for a flat £1 per week most cheaply by proffering an extra concession to craftsmen. But that offer, which widened the principal engineering differential for the first time since 1917, was first rejected by the unions and finally accepted only after much internal conflict, some government intervention, and the National Arbitration Tribunal's threat of a compulsory award. In 1951 the C.S.E.U. returned to another flat-rate demand.

[2] See for instance, *Industrial Court* 2305 (N.U.R. versus Boilermakers' Society).

has a single organisation all the union membership. The industrial unions are thus often competing for members with unions organised on other principles—craft or general organisations. The policy of an industrial union in these circumstances seems much affected by the level at which this competition is most pronounced. When the N.U.R., again, made its 1949 claim for a general increase of 10%, it was widely held by members of the railway craft unions (the A.S.L.E. and F. and, especially, the Transport Salaried Staffs' Association)—which had already submitted claims for percentage increases of a different order—that their rival was making a counter-bid for members in the footplate and clerical grades. The situation of the A.E.U. is somewhat different : the original nucleus of that union consists of skilled mechanics : its expansion has been *downwards* in the industry, directed to the growing numbers of semi-skilled workers of both sexes. Its membership of fitters, turners, millwrights and the like is already very high, and it has now little hope of absorbing the separately-organised men of other crafts—patternmakers, sheet-metal workers and so on. But in attempting to recruit the less skilled employees, it is in competition with the general unions. Hence its persistent advocacy of flat-rate increases in the C.S.E.U., in which it has the largest block-vote.[1] These conditions combine with those power and economic relations between craft and general workers already sketched to make a complex of circumstance the pressure of which is a sufficient explanation of the invariable pattern of flat-rate claims in engineering.

Of the two groups of factors in union differentials policy—those arising from the nature and development of union organisation itself and those from the possibility of competition

[1]In the engineers' claims of 1949-50, the obvious roles of the different unions were reversed in a way which illustrates the effect of inter-union competition most strikingly. In the C.S.E.U.'s debates on wage policy, the most determined advocates of a flat claim of £1 a week were the A.E.U. and the Electrical Trades Union—another union with a craft nucleus but "industrial" ambitions. While the two general unions—based on the unskilled—recommended negotiating for "a new wages-structure" : a proposal that, although not precisely elaborated, was commonly taken to imply a reconstruction of differentials in which the semi-skilled and very skilled would receive particular attention.

between different grades of worker for the same jobs—which is the most important? The danger to the craftsman's security of "dilution" by unqualified labour is as old as the craft unions themselves: it was, for example, in the background to the first great labour conflict in engineering[1] of 1852. But the rates of craftsmen up to shortly before the First World War broadly maintained a percentage margin over those of the then unorganised labourers. The Committee on Industry and Trade,[2] examining in 1924-6 the "narrowing of differentials," gives a date to the change in the form of wage-movements. Estimating (with 1914 as 100) skilled men's "real" wage-rates to be 94 in 1926, as compared with 106 for the unskilled, it commented " . . . broadly, the money additions to the wage-rates of the two classes have been roughly equal in amount, but, generally speaking, in pre-war times the wages of the two classes moved, not by equal amounts but by equal percentages."

Again, there is the coincidence of the nation-wide extension of trades unionism and collective bargaining, with a radical change in the relations between workers' incomes. But the broad direction of that extension was downwards, from the organised "labour aristocracy" of the nineteenth century to the great mass of the unskilled, unprotected and badly-paid. Hence the modern primacy of the flat-rate form of union demand.[3]

VI.

There are certain important unions, however, which have followed the percentage form of wage advance into much more recent times, and one or two which continue to do so. There are certain industries where the better-paid—even if they have

[1]See *The Economist* on that dispute, 10th January, 1852 (quoted by *The Economist*, 12th January, 1952).

[2]*Survey of Industrial Relations*, p. 15.

[3]This also explains the common practice of non-manual unions of making demands which compromise between the flat-rate and percentage forms. Here the general direction of unionism's expansion has been "upwards." But these unions still have a need to attract the lower-paid salariat as well as the upper, and the former are more numerous among their members. The same rule—among other things—explains why the general unions are more willing to modify the flat-rate form than most. Although their main base is among the less skilled, they are often ready to adventure among the better-paid.

not been completely exempt from the "narrowing of differentials"—have at least preserved a relative advantage much greater than is common. This needs to be said because it is not obvious. The historical evidence for the "narrowing" is mainly agreed rates of wages per hour, per day, or per week. These provide the only statistically respectable information which is both widely available and susceptible to comparative treatment. It is a peculiar characteristic of the exceptions to the general "narrowing," however, that the workers most advantaged are wholly or mainly engaged on piecework, prices for which have not been related to any standard time wage. Analyses of the sort made for other industries would here require data on the *earnings* of the separate classes of workers concerned which has not been collected in the past and is not collected now.[1] From other evidence, however, I believe it possible to make very fair surmises about the movement of differentials in these trades.

The differentials particularly concerned are those of face-workers over others in coal-mining, senior over less senior process workers in heavy steel (and of all process over ancillary steel workers), and finally of mule spinners over their assistants in cotton.[2] These groups are worth examining because of the

[1]For these reasons, studies of the movement of relative wage-rates such as those referred to earlier in this paper probably picture a rather closer "narrowing of differentials" than has actually occurred over manual employment *as a whole*. Even were such data on earnings in these piecework trades available, however, it would still need much refinement—to eliminate, for instance, the effect of overtime payment, and of "slack" and "rush" working—before it could provide such satisfactory comparisons as do time (or time-based) rates.

[2]As a list of cases of "the maintenance of differentials" this does not pretend to be exhaustive. There may well be other minor examples among male manual workers. There are important groups—cardroom and ringroom operatives in cotton certainly, and wool textile workers possibly—where relative differentials between *associated* workers have been maintained. But in these latter trades, the relationship between men's and women's rates is also involved—a study in itself. Suffice is to say, here, that it seems very common for this to persist on a percentage basis where women offer no competition for men's jobs, and for union wage demands to take an equalising form where they do. If women really want "Equal Pay"—meaning greater equality in men's and women's incomes generally, rather than identical rates in those few occupations where they at present do the same work—they would do better to seek entry into the men's jobs. Then the men would get it for them.

additional light they throw on the formation of union economic policy in general and—by way of contrast—the reasons for the "narrowing of differentials" in particular. But just because the fact of exceptions to that process has not to date (and to my knowledge) been stated, some testimony to their existence is first necessary. (The reader who is willing to take that on trust might perhaps go straight on the Section VII).

Manual workers in the heavy steel industry may be roughly classified into three main groups—apart from the various specialist operatives. The first is the class of workers directly responsible for making and processing the steel—the "process workers." These are organised as teams of melters, rollermen, and so on. The second group consists of their assistants and labourers. The third is the maintenance and allied workers. The relation between members of the first groups, and between the first and second groups as a whole, are most important for present purposes. (The third class consists mainly of engineering and building craftsmen and their mates : while their standing in the steel industry is of some interest, their position is complicated by their external craft affiliations).

The wages of the process workers are based on "tonnage" or similar forms of piece-rate : those of their assistants, on time-rates. All these rates are fixed by local or works agreements except for that of the melters, which is nationally-agreed. The melters' rate, however, has a special importance because most other rates in the industry have in the past followed its lead. The "basic melters' sliding-scale" was first established in 1905. This provided for automatic percentage adjustments in rates by a formula based on the selling-price of certain steel products (at present, for instance, the addition to "book" rates prescribed by this formula is 75%). The melters, however, are not paid individually, but by the output of the furnace for which they are responsible. The week's earnings of each furnace are first shared among the three teams which operate it on shifts. Each team's earnings are then shared again among its members, in accordance with long-established formulae. A share-system for a furnace worked by four

melters, for instance, gives individual shares of from 38·5% for the first hand, down to 14·5% for the fourth hand. A similar principle operates among other process workers: the members of rolling teams are now paid by individual tonnage rates, but these are related to each other in a percentage way. The combined effect of the team system and of the sliding-scale system was thus—so long as the latter operated—to maintain relative differentials both among the process workers, and between the process workers as a whole and their auxiliaries.

In 1940, however, the sliding-scale addition, which then stood at 67½%, was frozen, and all workers were granted a *flat-rate* "cost-of-living" payment of 1/- per shift. Since then, this new "standard addition" has served as the main vehicle of increases in agreed wages. In July, 1940, just after it was initiated, average weekly earnings of men in the steel industry were about 106/-, of which some 6/- were probably accounted for by the "standard addition." By April, 1951, when average earnings were rather over 184/-, the "standard addition" had been increased to about 45/- a week. Since this flat-rate payment had thus risen from about a twentieth to nearly a quarter of the average wage [1] of all workers, *relative* differences between the higher and the lower-paid would appear to have narrowed somewhat.

But only about half of the increase in steel-workers' earnings between 1940 and 1951 was accounted for by the flat-rate payments. The other half, according to people in the trade, was due to three things. First: increases in production. Although in the interval "production bonus" systems had been introduced by most works for workers paid on a time basis, the normal yield of these seems even now to be only about 10%–15% above the basic rates. The greatest benefit from rising output would thus go to the process workers, the major part of whose wage still consists of a piece-rate.

[1] The earnings figures for July, 1940, relates to the category then described by the Ministry of Labour's periodic return as "iron puddling, steel smelting, rolling, etc." That for April, 1951, is for the group described in the revised forms as "iron and steel smelting, rolling, etc., not elsewhere specified." No figures of hours worked were published for the first date, but six shifts seems to have been normal. In April, 1951, the average working week was 48 hours.

Second : the continual adjustments in tonnage rates required to cover new technical situations. Under the bargaining circumstances of the past few years these have usually led to higher piecework earnings, from which the process workers alone benefit. While a final condition which widened all cash differentials was the granting of extra shift-payments—made in proportion to previous pay—on the introduction of the continuous working system in 1947.

All these things, therefore, went to offset the levelling effect of the "standard addition." Despite them, however, it was agreed in April, 1951, that the previously-frozen sliding-scale increment be increased by 7½%, with the avowed intent of "restoring differentials." In September, 1951, the opinion of union officials was that the normal weekly earnings in melting teams ranged from £7 for the least senior members to between £15 and £21, according to furnace-size, for first hands. In rolling teams, the range of earnings on very large mills was probably even wider. The normal earnings of labourers—from whom the members of the process teams are recruited—were estimated at between £6 and £6 10s. a week.

This range of normal earnings can be compared, for instance, with that between the least and most skilled engineering workers. The normal earnings of engineers' labourers are probably nearly three-quarters of those of toolroom mechanics and patternmakers. Against this, the leading group of steel workers—the senior melters—retain, despite technical changes which have probably somewhat reduced their responsibility, a normal wage three times that of their labourers.

The situation in cotton-spinning is rather more simple. Each pair of "mules" is worked by a spinner or "minder," and two assistants, a "big piecer" and a "little piecer." The minders, like the steel process workers, are employed on piece-rates, while their assistants are time-workers. Until 1946 most minders were paid by either the "Bolton" or "Oldham List" of piecework prices, while the assistants' rates were fixed in local and mill bargaining. The little piecer is a boy, and can be left out of the picture for the moment. The big piecer, however, is quite a skilled worker. The relation between the

earnings of the minder and of this adult assistant over a long period is shown by the following table :

List Area	Average Weekly Earnings of Big Piecers as a % of those of Minders		
	1906	1920	1932
Oldham	46·3	47·5	43·6
Bolton	33·7	30·6	32·6

The authors of the study from which these figures are derived, after remarking that the relation between the wages of spinners and piecers had remained unchanged even during the First World War, when wages of unskilled workers in most industries were moving relatively closer to those of the skilled, went on [1] to state, indeed, that "since 1886 . . . the position of the big piecer has worsened in relation to that of the spinner."

Some slight reduction of the gap probably took place after 1933, when the employers were induced—to prevent piecers' pay falling below the "dole"—to give them small direct payments over and above the wage passed them by the spinners from the mules' earnings. And in the closing years of the Second World War the spinners temporarily abandoned their traditional preference for percentage wage-advances, and accepted flat-rate "additions" from which the piecers also gained. But notable improvement in the condition of piecers did not come until after the war. As part of the post-war "reconversion" of the cotton trades, an official Commission of Enquiry—which included the officers of the mule-spinners' union—examined the spinning wage-system, told the spinners that "their present wage levels are in part attributable to the unjustifiably low rates paid in the past to the other mule gate operatives," and proposed a reform. These "Evershed" recommendations included the re-grading of big piecers as "assistant spinners" and the payment to them of a standard time wage approximately 60% of the minders' normal earnings.[2]

[1] *Wages and Labour in the Cotton Spinning Industry.* J. Jewkes and E. M. Gray, p. 176.

[2] See "*The Cotton Spinning Industry : Report of a Commission set up to review Wage Arrangements, etc.*" and *Supplements* (H.M.S.O. 1945 and 1946). The Commission also proposed a revised "incentive" system of payment to spinners, and the proportion above refers to the "key figure" wage under that system.

In the actual agreement of 1948, this proportion was increased to 62% and a further small reduction in the minders' relative differential was made—by accident—in 1949.[1] After these upheavals, however, no further "narrowing" seems to have occurred. Subsequent wage-increases were in percentages. In October, 1951, people connected with the industry estimated assistant spinners' wages at between 58% and 65% of their seniors'. Spinners' earnings were reckoned at about ten guineas a week[2]: their cash differential over the big piecers at over £4. The differential implied in the Evershed report of 1946 and the agreement of 1948 had been rather under £3. The minders had made their concession to the times.

The senior steel and cotton-spinning workers preserved their relative differentials for long periods in face of contrary general trends. They have both, however, yielded something to contemporary pressures. The miners illustrate a rather different situation, in which differentials until recently by no means very exceptional seem to have widened sharply. The miners, like the steel workers, may be roughly grouped into three classes: the face-workers or "coal-getters" proper: the haulage and other workers who transport and handle the coal or assist the face-workers in various ways, underground or on the surface: and various specialists—deputies, shotfirers, enginemen, craftsmen, and so on. Again, the face-workers are mainly employed on piece or "contract" rates, and the other workers on time rates. There is a National Minimum Wage (with various national differentials for the specialists), but the face-workers' wage is not related to this in any set way, piece-prices being fixed locally.

[1]The 1949 increase had a peculiar history. A claim by the spinners' union for a general increase of 15% was referred to arbitration. The arbitrators awarded an increase of 7/6 per week to assistant spinners *only*. This caused a slight furore, and within three weeks the same increase was extended to the spinners by agreement.

[2]By way of contrast, the average of the separate returns made by employers and unions to the Evershed Commission gives weekly earnings for spinners in 1945 of £6 15s. 6d. in Bolton and £6 4s. 2½d. in Oldham—both exclusive of "absentee" payments to men on undermanned machines.

In 1945—the first year of the national minimum—the average weekly earnings [1] of colliery workers were £5 16s. 11d. The national minimum was £5 for underground and £4 10s. for surface workers. There is no evidence that overtime was extensive, but number of time-workers, apart from the higher-rated specialists, still enjoyed rates above the minimum under previous district agreements. The face-workers were then just under 40% of all colliers, of whom little more than 20% worked above ground. It does not, then, seem that face-workers at that time enjoyed any great advantage over others.

In 1950, however, the average weekly earnings [2] of colliers was £9 2s. 4d. Meanwhile the national minimum wage had been raised to £5 15s. for underground and £5 for surface workers. The lower rated time-workers might earn over the minimum by completing a full five shifts in the week and by voluntary overtime. But the average number of shifts worked by *all* colliers actually fell slightly between 1945 and 1950, while it may be inferred from output data that shifts worked by men at the face increased a little. The normal earnings of the mass of underground "daywage men" in 1950 cannot have been much more than £7 a week, if that, while certain groups of specialists were then complaining of a decline in their differentials. There seems no doubt, therefore, that in 1950 the face-workers enjoyed, in both absolute and relative terms, a much increased advantage over most other colliers.[3]

Though one can only estimate present differentials in these three industries, the contrast with the situation in industry at large seems worth making. Unskilled workers' wages generally seem to be about four-fifths those of skilled

[1] All figures of earnings and minimum wage rates in this and the following paragraph are inclusive of allowances in kind. Sources: *Coal Figures* and *Annual Reports of N.C.B.*

[2] The 1950 earnings figure is not exactly comparable with that for 1945, owing to a change in method of computation. This had the effect of increasing the earnings figure by about 3%.

[3] There had meanwhile also been a slight increase in the proportion of face-workers, but any effect on average earnings was probably offset by another increase in the proportion of the lower-paid surface workers. The five-day week agreement did not, so far as the writer can discover, have much effect on earnings differentials.

men.[1] The assistant spinner, however—at least a semi-skilled man—gets only three-fifths of the spinner's wage. The underground haulage collier probably earns a rather smaller proportion of the face-workers' pay packet. While the labourer in steel-smelting can only expect about half the wage of the average melter.

VII.

The short explanation of these industries' resistance to the "narrowing of differentials" would be that each of the unions concerned is dominated by the skilled or better-paid men. The senior process workers in the Iron and Steel Trades Confederation, the face-workers in the National Union of Mineworkers (N.U.M.), and the minders (or mule-spinners) in the Operative Spinners' Association—these represent the "hard core" of union membership, are the classes with the highest status in their trades, and usually provide the most active participants in their unions' affairs and administration. But that alone does not account for the extent to which the *interest* of these groups has influenced wage settlements. There is nothing new in the existence of an aristocracy within a trade union. The "green card men"—the skilled engineering mechanics—of the A.E.U. fill an analogous role in that body, but there the position has given its holders no great advantage over other grades in respect of wages : indeed, as has been shown, the necessities of recruiting and holding the less skilled have there reduced relative differentials. The *circumstances* of the better-paid's supremacy in these exceptional industries therefore need closer analysis.

Now, these three groups have important things in common. First, no rival unions exist which would accept any of the grades of worker which these bodies mainly organise. In two cases, all the workers concerned belong to a single trade union—the N.U.M. in collieries, the Operative Cotton Spinners[2] in

[1]See Knowles and Robertson, "Differences between the Wages of Skilled and Unskilled Workers" (*op. cit.*) Appendix.

[2]The union's full title is "The Amalgamated Association of Operative Cotton Spinners & Twiners." I use a common abbreviation.

mule spinning—while in heavy steel all process workers belong to the Iron and Steel Trades Confederation, to which labourers promoted to process teams are also required to transfer. Nor is there room for competing unions to develop. The existing organisations are very solid. In the mines union membership is an agreed condition of employment ; in steel it is an obligation which all process workers accept without question ; in cotton-spinning, non-union minders are unheard of. The minders, moreover, usually impress their assistants into the cotton-spinners' union, to which employers give an undivided recognition and have done for nearly a century. In steel, the tendency for the negotiation of process workers' conditions to become centralised in the hands of one union has been evident from the beginnings of the current negotiating system : [1] The right of the N.U.M. to deal on behalf of all workers in collieries save deputies was established at the time of the industry's nationalisation, and has been confirmed by inter-union agreement and arbitration decision.[2]

The second common feature of these unions is that none has any membership outside its principal industrial interest. They organise occupations which are confined to the industries in which these unions operate. They have no "craft" links with workers in other industries, and their approach to internal relativities is thus unaffected by the considerations which must colour the policies of union alliances extending across the frontiers of individual industries. National wage claims in shipbuilding, for instance, always follow the engineering pattern of flat-rate advances, although the working relationship between the skilled and the unskilled man is there very different from that in the engineering trade, and although in shipyard wage arrangements "sharing" and other systems analogous to those which give the senior steel workers and cotton-spinners their advantage are still common. The reason for this curiosity is that the same unions are involved in both industries, and

[1] See Odber, "Origins of Industrial Peace," *Oxford Economic Papers*, June, 1951, for an account of the earlier phase.

[2] *NAT.* 1541. The "breakaway" enginemen returned to the N.U.M. after their failure, by a final resort to arbitration, to secure recognition of their right to negotiate independently.

negotiations are in each case conducted through the C.S.E.U. The need for consistency of policy obliges these organisations to apply, at least at the national level, the engineering model to the allied industry. A similar relationship—of which the woodworkers' unions are probably the conductor—seems to exist between the building and furniture trades.

Here again, the structure of trades unionism is a vital influence on that of wages. Just as few British industries are embraced by one trade union exclusively, so there are few big unions which confine themselves to a single industry, while the greatest operate in a range of trades. In such unions the formulation of wage demands to the separate groups of employers with whom they deal is especially influenced by inter-industry comparisons and precedents. For the great unions with a craft basis, in particular, equity as between their members in different industries is as important an internal requisite of policy as equity between workers of different grades is to an industrial union : to the craftsman, the job he does is more material than the industry in which he does it. The strength of these "horizontal" forms of union organisation makes, over much of the wage-field, a pattern of overlapping circles of interest that cuts across conventional boundaries between industries. The spreading of wage-movements through this pattern, from such central bargaining arenas as engineering and building, is yet another factor in the predominance of the flat-rate form of pay increase.

The steel, coal and cotton unions, however, have no such need to take the form of wage-movements in other industries into account in formulating their own policy. Only the N.U.M. has members of crafts—carpenters, electricians, bricklayers, and the like—which are separately organised in their own unions outside the mining industry, and these workers were, by arrangement with their unions, either transferred to the N.U.M. or placed under that organisation's ministry for wage negotiations after 1945.

However, the solidity of their internal monopoly and their isolation from external influences reinforce—indeed, in some measure, reflect—what is a central quality of each of these

unions. The third and principal clue to the dominance of an aristocracy in steel, coal and mule-spinning is in its system of recruitment. The nature of the work is such that even if the ratio between the numbers of workers of different grades is not directly fixed by technical requirements—as it is so fixed under the usual British system of coal-getting—a scale of manning which has the same effect has been established by rigid convention or direct agreement. As vacancies occur, each grade is recruited—generally in accordance with an agreed seniority rule—from the one below. This system automatically forestalls the danger to the better-paid of "undercutting" by men not qualified by the conventions of the trade, since the number of the latter is automatically regulated by that of the skilled. In craft trades, however, the skilled workers are usually recruited only from those who enter as apprentices to the skilled occupations. Men who have not fulfilled that requirement have little or no hope of a respectable admittance to the better-paid grades. Hence the skilled men's need of a continual concern for the danger of "dilution." But the assistant spinners, the mining haulage workers and the junior members and labourers of steel process teams all expect that they will themselves, in time, be admitted to the better-paid jobs. That prospect, if it does not offer the lower-paid a full compensation for the abnormal wage advantage of their seniors, at least makes it difficult for them to establish a sufficient unity among themselves to change the position. Those of them who are high on the promotion roster have a strong interest in maintaining the existing system of status.

In these circumstances, revolt against the aristocracy's supremacy only occurs when unusual circumstances strengthen the position of the least senior workers or reduce the prospects of promotion.[1] Here cotton provides an outstanding example. Resentment of the minders' advantage in pay has been endemic

[1]Here it is significant that disputes seem much more common among maintenance workers in iron and steel than among process teams and their helpers, while the enginemen and craftsmen have been responsible for important mining stoppages over differentials. Both groups are outside this structure of promotion.

in spinning,[1] but that advantage has been very rarely challenged. Until quite recently the assistants (the "piecers") were paid and virtually employed by the minders. The manning of machines requires two adults (a minder and a "big" piecer) to one juvenile "little" piecer. To maintain this ratio the number of young recruits to the piecers' ranks was always several times that required to make up for death and retirement among their seniors. Only a minority of the boys who entered as little piecers could expect ultimate promotion to mule-spinners, therefore, and the occupation was regarded by most of them as a temporary one. Because of this, and of the fact that those who remained in the trade as big piecers did so in hope of securing a spinner's vacancy, all attempts to form independent piecers' unions failed, and piecers were incapable of making collective agreements on their own behalf. Significant improvement in the piecers' position have always been attributable to changes in circumstance which sharply swung the balance in their favour. On the system of wage-payment before 1948, for instance, the position of piecers in relation to spinners was considerably better in Oldham than in Bolton. This was because, during a series of disputes in 1874 and 1875 (when the Oldham Wage List took its characteristic form), the opening of a metal works in the former town created a shortage of male labour for spinning, and enabled the piecers to extract more favourable terms from the minders than those general in the cotton area. The improvement in the piecers' position after the Second World War followed similar circumstances, in which labour shortage had put them in a strong position, and in which, moreover, the chances of promotion to minders' vacancies seemed threatened by the re-employment of retired spinners. It was in these circumstances that, following a wage increase given in February, 1946, to mule spinners alone, piecers in several districts struck, with an effect which was at least contributory to the acceptance of the

> "God made the bees,
> The bees make the honey.
> The little piecer does the work,
> And the spinner gets the money."
> —(Lancashire tag).

"Evershed" wage reforms by the Operative Spinners' Association.

A system of organising and regulating the supply of labour of different grades such as that in steel or spinning may be called "vertical," to distinguish it from the "horizontal" system of the craft trades. These systems correspond in each case to the predominant form of union organisation. But, if one wished for a more perfect example of the "maintenance of differentials" than those offered above, it exists not among these or other occupations where the unions and the flow of labour are both organised on "vertical" lines and each grade of worker is recruited from the one below, but in industries in which the apprenticed craftsman remains a central figure. Where recruitment of skilled and general labour is more or less rigidly separated, and where separate unions base themselves on these distinct classes of operative, there remains one essential "vertical" element—the apprenticeship system itself. In several great crafts, the apprentices' rates are fixed, for each year of age or service, at a percentage of the skilled man's rate. These percentages have usually been established for many years. Even in industries where the flat-rate form of wage advance is otherwise normal they have been modified by no "standard bonus" or equalising payment. Between craftsman and apprentice, all the factors which favour the preservation of status between adult workers are present in concentration.[1]

In sum then, these better-paid workers have been able, in steel and cotton-spinning over long periods, and in mining in recent years, to preserve their relative economic status by offering to the lower-paid the consoling prospect of ultimate acceptance into their own ranks. But now the price the "labour aristocrats" of steel and cotton have paid for their

[1]Even in engineering, the extreme supporter of the flat-rate principle, the ratio between the wages of apprentices and of craftsmen remained unaffected either by the general levelling or by the post-war shortage of recruits. This situation was accepted by the youths themselves until in late 1951 the unions, having secured a rise of 11s. a week for men (both skilled and unskilled), claimed the same increase for women and actually obtained 10s. 1d. In consequence, the older apprentices' rates fell below those of young women of the same age—an oddity that led directly to the apprentices' strike of March, 1952.

primacy should be noted. This is a restriction on their freedom of movement approaching the extreme. The rule on the engagement of mule-spinners varies between mills. At best, however, a minder who loses his position can only apply for alternative vacancies in other mills, the remainder being reserved for promoted assistants. But even where such an agreement exists it is rarely applied : the one thing which invariably brings the piecers to mutiny is a threat to their promotion prospects. The unemployed top melter who seeks a job at another steel works must be prepared to start again at the bottom of the ladder. In some works, the rule applies even to individual furnaces, the unreplaced closure of which will reduce their senior workmen to the lowest level.[1]

The system incidentally ensures that jobless minders and melters shall not threaten the standards of the employed. But the maintenance of the group's economic position involves a certain harshness, in bad times, to its less fortunate individuals. By contrast, the apprenticed turner, joiner or printer, will find his craft union bent on securing him the rate for his trade anywhere in its area. Such unions still often operate as employment agencies, and in former times even encouraged mobility among their members—"tramp benefit" and the like.

As the organisation of labour has developed, then, it seems there is a choice of ways open to the more skilled to preserve their position. One offers better pay, the other greater freedom and mobility. But the separate features of each method hang together. Trade unions, like individuals, can rarely have it both ways.

VIII.

By way of a final comment on these exceptions to the "narrowing of differentials" one other aspect of the better-paid workers' advantage in steel, coal and cotton is worth

[1]Much the same system, by which seniority in the promotion roster is held only at individual pits, applies in many mines, but there it is less restrictive because the general shortage of mining labour means that new entrants will usually spend only two or three years as ancillary workers. A piecer has little prospect of becoming a mule-spinner before his 'thirties, while the top positions in steel process teams are reached only by quite middle-aged men.

examining. As between the craftsmen and the apprentice in engineering, building and other craft trades, the maintenance of relative differentials has demanded a consistent policy of *percentage* wage increases. As between the senior workers and their helpers in steel and cotton, however, that policy has been modified from time to time, while in coal it has never been followed. But in each of these three cases the better-paid class of workers is employed mainly on piece-rates, while the lower-paid is mainly engaged on time work. Now, piece-workers usually earn more than timeworkers of comparable skill. May not the senior grades' advantage in these exceptional trades be an accidental result of technical or other circumstances which may have led to different systems of wage-payment being adopted for the different grades of worker?

The analysis of this question is rather more complex than that of relations between workers of different grades employed on the same payment system, because even among workers of identical standing it is usual for piecework to yield something more than a constant, flat-rate, margin over time wages. Piecework is often harder work, and piece-workers' earnings naturally vary more than time-workers'. In times of rising wages—and prices—a fixed cash bonus for piecework would give a declining compensation for the extra effort and risk it involves.

But the piece-worker also has—at least in times of prosperity—other advantages over his partners on time-rates. First, he receives the direct reward of increasing production. Second, and perhaps even more important, is the effect of changes in products, methods, and equipment. Each of these demands an adjustment in piecework prices and thus presents the pieceworker with a new opportunity to bargain. The time-worker has to make his own opportunities of improvement and can, at best, only follow behind. This disparity seems especially responsible for the recent widening in mining cash differentials. The big factor in the 56% increase of miners' earnings between 1945 and 1950 was almost certainly the increased gains of face-workers. But over this period there was

no centrally-agreed increase in piece-rates, and at the face output-per-manshift rose only 15%. The time was, however, one of considerable reorganisation which must have involved new colliery piece-price and "contract" bargains in even greater numbers than the nature of the industry would normally demand. Such bargains would be comparatively little influenced by the considerations—a government policy of wage-restraint, a public opinion sensitive to price increases, and the like—which at that time affected such nationally-fixed rates as those governing the pay of day-wage colliers. The national minimum time-rates of colliers did not increase at a very different pace to those of industrial workers generally.[1]

In those craft trades, however, where workers may be employed on either piecework or timework, it is usual for the two sets of rates to be related by agreement. The most common method by which this is done is to have an agreed "basic wage" which regulates both the earnings of pieceworkers and the rates of timeworkers. Thus, piece-work prices in the boot and shoe trades are fixed, by local committees, at levels which will give pieceworkers earnings exceeding the centrally-fixed time rates by stated percentages according to degrees of skill. The rates of the numerous pieceworking engineers are supposed to be regulated so as to yield them earnings equal to

[1]What is important in the mining example, of course, is not piecework itself but the freedom of independent bargaining it gives to face-workers in individual pits. It seems possible, indeed, that the differences between the increases of earnings in separate industries over recent years may be due at least in part to the different levels at which negotiation affects rates. Between 1945 and 1950 the earnings of adult male manual workers increased by about 22%. No separate index of men's rates is available, but increases in nationally-agreed rates for adult males were probably about 15%—roughly the same as those in mining. But certain industries—coal, docks, vehicles, engineering—show bigger increases in earnings than the average. These are trades in which such factors as the prevalence of piecework at rates determined by workplace negotiation, or the absence of centrally-agreed rates for some grades, give many workers scope for organised bargaining outside the restrictions of the "industry-wide" negotiating systems. While wages fell behind the general movement of earnings in certain industries—like railways and public service occupations—where all earnings are exclusively determined by centrally-agreed rates. The development of the national systems of negotiation seems thus to have retarded the general movement of wages.

the timeworkers' wage plus a percentage of part of the latter sum.[1] And so on.

The difference between such a system and that which rules in steel, coal, and cotton-spinning is this : that in these cases where piecework has given a dominant group of union membership an advantage over their time-working auxiliaries, the wages of the two classes have been separately negotiated. In steel the process workers' rates are fixed separately from those of ancillary workers, and in most works by different unions. In mining, the face-workers' post-war advantage has arisen largely from the virtual separation of the fixing of their wages from those of other colliers. In cotton-spinning before 1933—in substance, indeed, up to 1948—the minders bargained collectively with the master-spinners, and then, in many cases, individually with their assistants.[2] In each instance the relative wages have escaped from the need for equity among allies. The pieceworker has been under no necessity to seek the support of the other grades to reinforce his negotiating strength. Indeed, in steel the peculiar form of recruitment already described has made his position so strong that he might have found such an alliance more burden than help. But in engineering and similar craft trades, the pieceworkers and timeworkers must combine to bargain with their employers. For their unions, the task of devising an equitable formula for this collaboration is technically more difficult [3] than for that between grades : it is nevertheless an equally necessary one.

[1]While actual earnings of pieceworkers usually exceed the sums implied by engineering national agreements, so do those of timeworkers. The *relation* between the wage packets of the two groups does not differ much, on the average, from that prescribed by the national rules (see here Tables VI and VII of "Earnings in Engineering" by Knowles and Robertson, already cited). The necessities of national negotiation are here reflected in the parallel workshop bargaining.

[2]While both the Oldham and Bolton Lists—negotiated by the Spinners—laid down time rates to be paid to piecers, these made no allowance for important factors in the spinners' earnings (notably the increasing speed of machinery) and were not in any case fully applied. Other local spinning lists did not even prescribe piecers' rates.

[3]Indeed it cannot be said that the problems created by this dichotomy of rates have been satisfactorily solved either in individual industries or in employment as a whole : the varying relationship between the earnings of pieceworkers and timeworkers is a source both of "anomalies" and general friction.

What is paramount, then, in determining whether or not the relationship between the pieceworkers' and the time-workers' wage shall be regulated by some formula acceptable to both, is the extent to which the influential sections of union membership feel the need of a combined front with the others—or to which the absence of such an equitable arrangement jeopardizes the unity of the union itself. When that consideration arises, even the "labour aristocracies" have been willing to meet it by concession. The possible danger of a piecers' revolt helped to persuade the Operative Spinners in 1948 to accept the "keying" of the earnings of the pieceworking mule-spinner to a "target" wage to which his assistant's time-rate was then related. In the mines the dissatisfaction of certain specialist time-workers—and particularly enginemen and craftsmen—at the alleged decline of their relative status after their incorporation in the industrial union (the N.U.M. was formed in 1945) broke out in "unofficial" disputes. Recent N.U.M. claims, especially those partially embodied in the mining agreement of February, 1951, have apparently been incidentally designed to readjust the balance in favour of these classes.[1]

There is, however, nothing in the nature of their work which would prevent the extension of piece-rates to the mule-spinners' assistants and to some, at least, of the steel process workers' helpers. But here the history of employment in steel and cotton illuminates further the position of their higher-paid. The old spinning system by which the minder virtually acted as a sub-contractor, employing his own assistants, has its parallel in steel : the employment of "subordinate" labour on contract by melters was certainly extensive before the First

[1]It may, in fact, be as yet too early to determine whether the recent reorganisation of the mines and mining trades unionism have not given the face-worker an advantage beyond that which his position in the union and the industry, central as it is, can maintain. His primacy may well be modified by the increases in national minima and by the development of new systems of work. Although in late 1951 the N.U.M. was compelled to seek general increases for face-workers as well as day-wage men, local piece-prices were "frozen" pending their general review.

World War and continued, though on a diminishing scale, in the inter-war period. The operative class of workers under such systems has usually worked on piece prices, while it paid time wages only to its ancillary labour. That arrangement usually gave the senior workers the highest margin of profit. In steel and cotton the descent of current forms of wage-payment from this relationship is clearly marked, and adds a historical element to the other explanations of their unions' dominance by the better-paid.[1]

Thus the steel process workers and the mule-spinners have been able to practice something of each of the two techniques by which one class of worker may, within a framework of collective bargaining, enjoy a continued and abnormal advantage in pay over others. These techniques are the percentage principle in wage advances, and the system of piece-rates uncontrolled by any rule relating them to the wage of timeworkers in the same industry. The mining situation seems more recent and there only the latter form applies. But in each of these three industries the piecework of the better-paid is less a cause than a symptom of their dominance.

IX.

Till now, this study has been mainly concerned with what may be called "major" differentials—those between workers who are conventially regarded as having very distinct levels of skill or responsibility. Here, the circumstances which have permitted the steel-workers and cotton-spinners to resist for

[1]Similar systems, involving the employment of fillers by hewers, seem to have been common in some mining districts, at least up to 1926. But the general organisation of mining work seems to have been transformed by the 'Thirties. The ancient "butty" system was, of course, a sub-contracting one, though that was more a matter of abhorence to miners generally than an accepted practice. It provided, however, the basis for the Webbs' discussion of the attitude of miners to piecework—*Industrial Democracy*, p. 290—in which there is much that is relevant to the problem of the relation between piece-worker and timeworker.

so long the "narrowing of differentials" are rare.[1] Comprehensive agreements, that bring all the workers of each industry into a common framework of wage-rates, are increasingly the rule.[2] Within these agreements, the wage policies of most unions—even if they occasionally veer towards the percentage form of wage-claim—in general hasten the "narrowing" process. By way of completing the picture, however, another tendency evident in all large unions and alliances of unions should be recorded. This tendency seems to hold regardless of whether their policies on "major" differentials follow the common or the exceptional patterns.

This concerns what I shall call "minor" differentials. I would include in this group established differentials between areas, between closely-related crafts, and between workers of comparable skill in different sections of a trade or, often, in different establishments in the same section. Examples of inter-area and inter-craft differentials have already been cited. Differentials between sections of a trade may be instanced by that (now confirmed by arbitration award) between grocery and meat managers in retail food, or by the "lead" rates of vehicles maintenance workers in some municipal depots over those in private depots in the same city. "House" and "merit" rates in printing and several other industries illustrate differentials between establishments.

Most of these minor differentials are historical accidents—by origin the product of the differing strengths and circumstances of the parties in unconnected local and sectional

[1] While the evidence available is too limited to permit more than a guess, it seems probable that in those "professions" whose collective organisation is nearer that of the guild—combining employers, self-employed, and employees—than the trade union, and in which the senior members have a dominant influence, the maintenance of income differentials on a proportionate (if not an even wider "piecework/timework") basis is common. Certainly, when these are embodied in collective agreements—as the increasing employment of professional people by public bodies requires—the percentage form is a normal one (see Industrial Court Award No. 2321—Assistant Medical Officers of Health—for instance).

[2] Even where the various operatives of an industry are not formally covered by a single agreement, the tendency is—as in printing—for all rates to follow a single key bargain, and for the latter itself to be conditioned by the knowledge of its wider influence.

bargaining. They have been later "frozen" by the necessities of centralised negotiation. When attacked such differentials are often supported by arguments which have a colour of reason, but which closer analysis usually shows to be justifications after the event. Inter-craft differentials, like those of engineering, for instance, will be justified by a subtle grading of skills : but in some districts the established rate for boilermarkers is lower than that of smiths, and in others, higher. The usual argument for area differentials is differences in local living costs : it is very doubtful, however, whether local variations in wage-rates and prices bear any very close relation to each other. And so on.[1] The casual nature of most variations of this kind is further illustrated by the fact that different types of minor differentials sometimes coincide—as when, in printing and some woodworking trades, different districts are organised by different craft unions, and the local differentials are also regarded as inter-craft differentials.

While the acceptance of a variety of minor local and sectional rates of this kind was often an initial condition of union negotiating mergers, a pressure to standardise has, since the inception of these groupings, been persistent. Building's original seventeen district rates, for instance, have been steadily reduced by merging to six under the current agreement, and their range of difference is much narrowed. The various district rates for engineering fitters and labourers were practically eliminated by absorption in the national minima of 1950. Some contemporary national agreements—like that for railways—maintain London's advantage only : agreements

[1]The question of differences in wages paid by different establishments is, of course, more complex. This arises mainly in industries neither monopolised nor nationalised—though even there a public or private monopoly has sometimes had to take over the separate wage-commitments of its predecessors. Outside such industries, most workers are employed by firms "federated" to employers' associations, and these often prevent their members paying more than agreed rates. Where these conditions do not hold, such payments may reflect differences in union strength between firms, employers' bidding for labour, or sometimes, motives of benevolence or paternalism. But once given, such "plus-rates" often become regarded by workers as established rights and their withdrawal by the employer will be resisted, although the circumstances which first led him to make them have passed.

providing for more than three local rates for the same class of worker are increasingly rare.[1] Even more significant has been the gradual disappearance of differentials between men of separate crafts. In the sector of industry covered by agreements between the C.S.E.U., and the Engineering and Allied Employers' National Federation, different crafts are still distinguished by separate rates—some (like woodworkers and woodcutting machinists, vehicle-builders and electricians) by national differentials over the fitters, others (like smiths, boilermakers, and patternmakers) by their own district rates. These craft differentials have, of course, been preserved by the engineering system of national flat-rate additions. But in several industries which also employ the same craftsmen extensively, such differentials have been reduced. In shipbuilding and sections of the vehicle trades, there is now a common time-rate for metal-and wood-workers and electrical craftsmen ; in the railway workshops,[2] only the patternmakers preserve their differential above other crafts ; and in heavy chemicals outside I.C.I., even that élite of engineering craftsmen enjoys no advantage.

Pressure from organised employers accounts for the disappearance of some "minor" differentials. Employers' associations often object to a proposed increase in rates on the ground that their members would also be required to maintain the previous advantage of workers in individual establishments or localities.[3] New agreements sometimes provide for these "plus-rates" to be wholly or partly absorbed, therefore : such a provision was attached to the agreement which terminated the London printing dispute of 1950. Professional negotiators on both sides have, obviously and in any case, an interest in the

[1]See "Local variations in Wage Rates," *Ministry of Labour Gazette*, December, 1951.

[2]Apart from a small section in which engineering rates apply—again a heritage of past resistance to the loss of a sectional advantage.

[3]Motives which seem normal to the policy of employers' associations are those of preventing competitive bidding for labour and establishing uniform labour costs among their members ; hence their common prohibition of "plus-payments" and their frequent support of union demands for state reinforcement of minimum rates in poorly-organised trades.

simplification of rates : it facilitates both the making and administration of agreements. But there is also a strong pressure in the same direction within many unions and alliances of unions—particularly at the level of their central leaderships. An accepted standard rate is likely to encourage solidarity among the members, while the existence of different rates perpetuates sectional distinctions. The simpler the rate-structure, the easier the exposition and "sloganising" of union wage policy. Separate rates for workers of distinct but overlapping skills (the line between sheetmetal workers and boilermakers is drawn in thousandths of an inch) are especially the background of many demarcation disputes which jeopardize unity between trades unionists. Thus, the "consolidation" of local rates and sectional differentials has often been initiated by unions.

But here, the unions must go carefully. Every move to eliminate a minor differential involves a balance between the desiderata of central leadership and general solidarity on the one hand, and the sectional interest in maintaining an existing advantage on the other. The elimination of the "Liverpool differential" in shipbuilding under the national agreement of late 1950 led to a stubborn dispute. (The "Liverpool differential" survived in the building trades until the end of the Second World War). The reaction induced by scaling-down certain engineering pieceworkers' advantages in 1950 has already been noted. The reduction of an inter-craft differential is sometimes facilitated by the craftsman's fear of "undercutting" by his neighbours of related skills, but it must nevertheless always be approached with caution. This union policy of uniformity, therefore, is subject always to the qualification that it shall not disturb immediate unity overmuch. So, the movement to level out minor differences between members is the more gradual the greater the complexity of the existing and traditional relations between the workers and unions affected, and of the consequent variety of interests to be reconciled to it. It seems, moreover, to some extent dependent on where the balance of power weighs as between officials and lay members within unions. These things certainly

account for the slowness of the pace of consolidation in engineering as compared with other industries.

It is also a result of such difficulties that these mergings of rates have almost invariably been made as part of wider wage movements—usually by incorporating a "levelling-up" between areas and grades in a general increase in rates. The process has therefore advanced most rapidly since 1939. Indeed, in some cases it has only appeared during this period; the reduction in the number of area rates in printing, for instance, dates only from 1943. The way has been made easier, no doubt, by the dwindling in both real and relative values of cash differentials (because of the predominance of flat-rate wage movements, nearly all these minor differentials are fixed cash sums) brought about by the general rise in wages and prices. This was certainly a factor in the merging of railway grades by the agreement of February, 1951, and in several recent local re-gradings in other occupations. Thus, that "narrowing" which follows unions' general bent towards the flat-rate wage advance accelerates itself. Yesterday's "established differential" becomes to-day's "anomaly."

But this last factor affects not merely such minor differentials as those here described, but the major differentials for skill and responsibility themselves. Although it has meaning in terms of trade union policy and is of analytic value, the line between major and minor differentials should not be too finely drawn. There must be many inter-craft and similar differentials which were once accepted as the badge of superior skill but are now regarded, by all concerned except some who enjoy them, as anomalous nuisances. The general conception of what work is particularly skilled, responsible and meritorious is itself much influenced by historical, institutional and conventional factors—of which the existence of a special reward for doing such work is one. If wages in most industries continue to advance on the flat-rate principle, there will inevitably come a point at which the better-paid workers must either revolt and force upon their unions a general revision of

wage-relativities, or accept the extinction of their economic advantage as an anachronism.[1]

X

This study has involved, regrettably but inevitably, some detailed reciting of situations in industry. It may, then, be useful to recapitulate and point its argument before sketching some general comments that may be made upon it. It took as its starting point that "narrowing of differentials" which has been, in the past forty years, so remarkable a feature of the British wage situation—most notably of the relation between the wages of skilled and less skilled workers. Reasons so far put forward to explain this phenomenon—the effects of unemployment, of technical progress, of social egalitarianism, and of the wage-policy of employers—were discussed and rejected, at least as main factors in the trend. The thesis of this essay is rather that the "narrowing of differentials" is due to the development, in that period, of trades unionism itself.

This growth of the unions has been characterised by three things which are relevant to the problem. First, by the extension of trades unionism from a small "labour aristocracy" to the mass of manual workers, and of collective bargaining to the overwhelming majority of employees. Second, by the construction of great unions and alliances of unions, which bring workers of many different grades (and different industries) into a single unit for bargaining purposes. Third, by a parallel widening of the coverage of individual collective agreements, from separate localities, crafts, and sections to whole industries. These developments have been accompanied by a change in the normal form of wage-increase from one which broadly maintained proportionate relations between wages to the "flat-rate" form, which gives identical *cash* increases to all workers affected. Such increases automatically reduce *relative* differences between wages.

Employers have had little to do with this change—there are, indeed, instances where they have opposed it. The reason

[1]Something of this kind appears to have been partly responsible for the breakdown of the "national wage policy" agreed by the Norwegian government and industry after the war.

for it is the modern prevalence of flat-rate *demands* by trade unions. This is explained by the necessities which arise in the building-up of these great union groups and in the making of their "industry-wide" agreements. The first condition of the formation of these alliances was that they should avoid any disturbance of existing relations between their members' wages which might provoke internal dissensions and disunity. This resulted in an initial "freezing" of the differentials inherited from sectional and individual bargaining. The second necessity of solidarity in large-scale trades unionism was—and continues to be—a formula for wage demands appearing to apply equally to all the workers concerned. This need is usually met by demanding that all wages in the trade concerned be increased by a standard sum or ratio, thus perpetuating the original variety of wage-rates. The whole process is helped because it is much easier for unions to "sloganise," negotiate and enforce simple, standard increases in existing wages than to deal with elaborate re-adjustments of differentials and varying increases for the different grades of their membership.

But there are two formulae which meet all these requirements. One is the flat-rate demand. The other is the "percentage" claim, which gives the same *proportionate* increase to all the workers concerned, thus maintaining *relative* differentials. Why has modern trades unionism mainly preferred the first form rather than the latter? It could be said shortly that flat-rate claims are usual where the less skilled workers are numerous in the unions, and that unions which are dominated by the better-paid often prefer percentage demands. But the balance of power within unions is not by itself an adequate explanation, because there are exceptions in both groups. Particularly, there are several unions in which the leading positions are held by (sometimes reserved to) the skilled men which nevertheless habitually make or support flat-rate demands. One reason for this oddity is the constitutional procedure of some unions and especially of important federations of unions. "Block-voting," balloting, and other methods of deciding policy by counting heads offset the fact of skilled workers' more intense attachment to and activity in trade

unions. But much the most important reason for the prevalence of flat-rate demands is the effect of unions' expansionist aims and of inter-union competition for members. The general direction of unionism's growth has been *downwards*—from the skilled to the great body of semi- and unskilled workers. Unions have adopted the form of wage demand most likely to attract and hold members. The skilled men are in most cases already held by tradition, "craft" allegiance, and so on. Moreover, in trades where labour's organisation is "horizontal" (*i.e.* where the skilled are not recruited from the unskilled but from apprentices or similar trainees, and where separate unions are based on and enforce this system), the skilled workers have acquiesced in flat-rate wage movements from fear of "undercutting" (competition for their jobs from unqualified men) if cash margins for skill were to be widened.

There is, however, a small but important group of industries which are exceptions to the general trend. In these industries the organisation of unions and of labour recruitment is "vertical" rather than "horizontal." First, the grades most concerned usually belong to a single union, which has what amounts to a "closed shop" of the workers for whom it negotiates. Expansionism and inter-union competition thus play little part in its motives. Second, these unions—unlike many big unions—do not operate in more than one industry, so that their internal wage-policies are not affected by considerations of consistency as between members in different trades. But thirdly, and most important, the better-paid (and most influential) members are themselves recruited from the less skilled. Both the method of promotion and the proportion of workers of different grades are regulated by agreement or established practice. The lower-paid workers are thus compensated by the promise of ultimate promotion to the leading group, while the latter need have no fear of "undercutting." But, for their pay advantage, the skilled pay the price of a tight restriction on their mobility, to protect the claims of their auxiliaries to better-paid vacancies.

In these exceptional industries, relative differentials have been maintained by one or both of two methods. The first is

the percentage principle of wage advances. The second is more complex. It consists in the payment of the senior workers by piece and the junior by time-rates. Piecework gives certain advantages : in itself, it *usually* carries an extra reward : it often gives the worker a direct benefit from production increases : most important, with continual changes in products and methods, it brings recurring bargaining opportunities. But in most industries, the needs of union bargaining solidarity have produced agreements that tie the pieceworkers' earnings to those of timeworkers. In the exceptional group, however, the better-paid have not needed to secure the support of other workers by making such an arrangement, and have so been able to exploit piecework's advantages more fully.

These exceptions are probably accounted for by historical factors (by ultimate origin, I suspect, of a quite antique character). But exceptions they are. In most industries, the forms of union organisation, and the system of labour recruitment it supports, make for wage policies which hasten the "narrowing of differentials." But to that trend a final factor contributes, and this is common to *all* large union groups, though the pace of its operation varies. Apart from the "major" differentials, between workers of different skill and responsibility, there are many "minor" differentials—between areas, related crafts, different sections of the same trade, and so on. These are accidents, product of the unconnected bargains of the past, which have been preserved by later wage-movements. But they are also nuisances to unions. They complicate the making and administration of agreements : they obstruct union and inter-union solidarity by perpetuating sectional distinctions between their members and encouraging "demarcation" disputes. There is thus a steady pressure to eliminate these minor differentials. This is a gradual process, because union leaders must always avoid provoking a break-away of those who benefit from them. But it has been facilitated by the reduction in the relative value of *all* differentials which general flat-rate increases in wages themselves involve.

These things are all said, of course, subject to those qualifications which ought to be made as to the dangers, so far as the above summary is concerned, of simplification, and as regards the preceding sections, of abstraction and generalisation from a complex pattern of complicated situations. The main point remains, however : that in the development of mass trades unionism and of industry-wide negotiation, the day-to-day needs of united action are reinforced, in their long-term effect on wage differences, by the more gradual pressure to consolidate that unity. They have the same egalitarian result.

It might perhaps be argued that the unions are not the prime mover in this process : that as regards its main strand—the changed form of wage movements—there would have been no "narrowing of differentials" if wages had not increased : and that wage demands followed rising prices. But granted that prices *have* increased, the mechanics of unionism has ensured that relative wage-differentials be narrowed. While—if the much-popularised "vicious spiral" has any validity—the argument itself concerns the precedence of chickens and eggs. It might at least be retorted that the reason why wages and prices did not fall back, in the inter-war depressions, to their pre-1914 level, was very possibly the intervening growth of collective organisation in industry. Moreover, it is not necessarily the case (for reasons the detailing of which would launch a separate discussion) that a fall in prices and wages exactly reverses the "narrowing" procedure : the laws of decline are not always those of ascent. But the improvement of wages is, in any case, a first objective of trades unionism : it seems reasonable to say, then, that greater equality of wages is an implicit result of the organisation of workers themselves.

So much for this study's argument. By way of broadening its application, it can be noted that the "narrowing of differentials" seems characteristic of most developed economies of the Western type. The actual degree of "narrowing" varies from Scandinavia to the U.S.A.—I would say, with the extent and antiquity of mass trades unionism, its detailed form of organisation, and the coverage of collective bargaining. In all

these countries, however, the same central factor has operated—the democratic widening of trades unionism from a select group of workers to the mass.

In concluding, I propose only to point to certain general implications of the preceding analysis. In this study I have discussed only the relations between wages *within* industries, and not the links which trades unionism and other institutional developments have established *between* employment groups. Yet these are numerous. Among the most important of them are those internal necessities of "multi-industry" unionism to which I have referred in passing. They also include the acceptance of comparitive conventions (the "Fair Wage" principle, etc.) as a basis of wage-fixing in many normal agreements, by industrial arbitrators, by legal wage boards, and by public authorities. They are strengthened by the "wage-leadership" of certain key industries, the agreements of which set the mode for a whole range of related trades, and by the extension, in Britain and certain other countries, of collective bargaining or related techniques to all but a tiny minority of employees. They are often as rigid, and as resistant to changes other than those proceeding from their own nature, as the internal differentials I have analysed. If one takes both internal and inter-industry relativities together, the final effect of mass unionism and comprehensive collective bargaining is to press the whole system of wage-relations into a mould cast by a logic of their own and reinforced by convention.

This, I believe, has two consequences. First for the contemporary discussion of "wage policy"—that is for some system by which relations between different wages would be manipulated, by central decision, in accordance with various economic ends. But these relations are increasingly set, and that by neither the accident of the "labour market" (a dubious term) nor the conscious will of those involved. They derive rather from the interplay of forces in the present structure of trades unionism, collective bargaining, and relations between people at work. A comprehensive wage policy—of an implicit, not an explicit kind—seems a logical outcome of unionism's further development. Any raising of the level of collective

bargaining from the industrial to the national must at once broaden the working of those factors which now shape wage-relations *within* industries into the wider field. As I think comparative study of recent "national wage-policies" in the West and of those of the Soviet world would suggest, the task any deliberate and national wage-planning that goes much beyond the temporary "wage-freeze" has to face is that of either finding a means to accommodate itself to the forces at work in industry's present system of collective organisation, or reconstructing that system wholesale.

The second implication of this analysis is for the wage-theory of economists. The present state of this is so unsatisfactory, I suggest, mainly because much that is currently retailed there is based on concepts derived from a situation now obsolete, at least in Britain. That situation was one predominantly of individual bargaining, on which many scattered and unconnected group bargains were superimposed. Hence theory's several attempts to adapt its first formulations by other concepts derived from the analytical study of business monopoly—"imperfect competition," "monopolistic bargaining," and so forth. What are not commonly recognised are the distinctive forms imposed on the wage-system by mass unionism and widely-based, comprehensive negotiations. The tendency of these is first to crystallise the wage-relativities inherited from the preceding era, and then to modify them by their own logic, which is more that of political forms than of the market-place.

There is, of course, nothing new in the statement that the motives of union policy are only of a quasi-economic kind, though the aspect dealt with in this paper has not, so far as I know, been previously explored to any depth—revealing as that aspect seems to the writer. But the motivation of union wage policy is central to the Ross/Dunlop discussion.[1] What is curious is that that discussion should have developed in the United States, where the determination of wages is still in transition between the historical and the modern phase.

[1] *Wage Determination under Trade Unions* (Dunlop), and *Trade Union Wages Policy* (Ross), of course.

Mass unionism there was virtually a creation of the Roosevelt era, and still embraces less than a third of employed Americans. Of its full implications, British labour provides the more advanced illustration.

One final point of theoretical interest. A central issue of wage-theory is the effect of trades unionism on the distribution of the national product. On the involved controversy as to labour organisation's impact on the distribution of gains between wage-earners and others, this study has nothing to say. The second discussion, of its effect on the distribution between the organised and the unorganised, becomes less relevant as organisation widens. But what is clear is that trades unionism—whatever its effect on the relative shares of workers and employers—has the profoundest impact on the distribution of income among the organised working-class itself.

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The Social Science Association, 1857-1886

I.

The National Association for the Promotion of Social Science [1] was, for nearly thirty years, an organisation of importance in the life of Victorian England. It was an attempt to bring together an inchoate body of social reformers, social workers, lawyers, educationalists, economists, doctors and business men into an annual congress something like that of the British Association. These congresses took place in all our larger cities and were important civic occasions. They were, like the British Association, divided into different sections (called departments) covering various more or less homogeneous fields, and presided over by well known figures, and in each department papers which had been prepared in advance were read, and in some measure discussed. Each year a volume of *Transactions* was published and in these volumes most of the papers appeared, to provide us with a valuable picture of middle-class thought on certain social problems during the period of Britain's industrial supremacy. Unlike the British Association, however, the S.S.A., by the very nature of its subject matter, could not stand aside from public issues of social policy, and its attempts to influence that policy are of as much historical interest as the contents of the papers.

II.

The meeting which presided over the birth of the Association took place under Lord Brougham's roof and patronage in 1856. It had obviously been well prepared, for it not only brought together a distinguished assembly of interested people, but also presented them with a request from Birmingham that that city should be permitted to act as the first host. Brougham was the obvious person to sponsor the new organisation designed to provide "to those

[1] In the interest of brevity this title will hereafter be abbreviated to Social Science Association (or S.S.A.) the name by which it came generally to be known.

engaged in all the various efforts now happily begun for the improvement of the people an opportunity for considering social economics as a whole."[1] His interests were broad enough to embrace the widest range of the founders' conceptions, and he had been particularly interested in two fields, which were to become major departments in the Association, Law Amendment and Education. Brougham was, moreover, now sufficiently eminent for his political quarrels to be overlooked, and he could give considerable prestige to the new society.

It is a little difficult at this distance to find the exact source of such an organisation (or indeed, to trace the origin of the phrase "Social Science"), but it is clear that there was a very substantial body of influential people interested enough to bless the plan, to become members of the Association's many and huge committees, or to write papers for its first congress. The General Committee alone had 139 members, including no fewer than nineteen peers or sons of peers (among whom were Lord Shaftesbury and Lord John Russell), twenty-seven Members of Parliament, ten fellows of the Royal Society, and such eminent people in the field of the social sciences as Edwin Chadwick, Dr. Farr, Charles Kingsley, John Stuart Mill, John Ruskin, James Kaye-Shuttleworth and John Simon.[2] But the central and the departmental committees contained other members of note in the field of social service (to use a modern phrase). Thus the Department of Jurisprudence and Amendment of the Law was guided not only by many practising members of the Bar, but also by men like Leone Levi ;[3] the Education Department by people like Joseph Sturge of the Adult Schools and the Rev. C. P. Norris of the National Society. The Public Health Department tended to collect practising medical men, but Simon, Chadwick and Southwood Smith were also there, and the Department of Economy and Trade

[1] *Transactions*, 1857, xxi.

[2] *Transactions*, 1857, xv.

[3] 1821-1888. An Italian, Professor of Principles and Practice of Commerce, Kings College, London. He was for a time Hon. Sec. of Liverpool Chamber of Commerce, and was interested in Ragged Schools. He was consulted by those who founded the Charity Organization Society.

had members of Chambers of Commerce, and practical men like David Chadwick, the Borough Treasurer of Salford, side by side with theorists like Mill and Newmarch. In the field of Punishment and Reformation, however, the practical workers were really to the fore, and men of the stamp of T. B. Ll. Baker[1] of Gloucester, Capt. Crofton [2] of the Irish Prison Service, and M. Davenport Hill, the radical Recorder of Birmingham, played an extremely important part. Mary Carpenter [3] was to be a leading speaker in this section. There were, of course, gains and losses on the committees. Mill, for example was not a member for long (and he never seems to have read a paper at the Congresses) but on the other hand Westlake [4] came and remained loyal to the end.

It is important to study the names of members and speakers with some care, for it is in them that we see the true nature of the organisation. It would seem that the original body was the result of a combination of a number of groups each concerned with some issue which troubled the social thought of the time. Many of the issues of the day could—at least for the thoughtful middle-classes—be brought together under five heads, *i.e.* Law Reform, Education, Penal Organization, Public Health and Social and Economic Conditions.

EDUCATION.

During this period the sectarian issue was one of the main sources of controversy, and though the problem was not dealt with for more than ten years, the Privy Council was in the

[1] 1807-1886. Sheriff of Gloucester, 1847/8. Interested in Reformatory Schools and penal matters.

[2] 1815-1897. Chairman of Directors of Convict Prisons in Ireland, 1854-62. Commissioner of County Borough gaols in England, 1865-68. Chairman of Prison Board for Ireland, 1877-8. He invented the "intermediate" prison.

[3] 1807-1877. Daughter of Unitarian Minister. Opened a Ragged School in Bristol in 1846; a Reformatory at Kingswood in 1852; a Reformatory for Girls in Bristol, 1854; and was a pioneer in the Industrial School movement. Travelled widely in later years and wrote about education and prison reform in India.

[4] 1828-1913. Fellow of Trinity College, Cambridge. Succeeded Maine in the Whewell Chair of International Law. Liberal Unionist M.P. for Romford, 1885/6. Assisted Maurice in the founding of the Working Men's College. Member of the International Court, The Hague, 1900/6.

meantime spending money and organizing inspection, and some of the best of its Inspectors (and ex-Inspectors) were members of the S.S.A. (men like Hugh Tremenheere [1] and Archdeacon Allen).[2] Other forms of education were being tried out—Industrial Schools, Reformatories, Ragged Schools and so on, and in these fields the 'fifties were years of both experiment and argument.

PENAL ORGANISATION.

The early 'fifties saw the last of transportation, and administrators were puzzled by the complexities of the problems presented by those sentenced to gaol. The framework of the prison system was obviously unsatisfactory and the principles of its reorganisation elusive. But there were few lacking in theories about the problem, and experiments were being undertaken. Crofton had reorganized the Irish system, and Maconochie's Norfolk Island experiment was becoming well known ; Sir Joshua Jebb [3] defended the *status quo*, and they all joined the S.S.A.—and read papers. Experiments were also being made in the field of juvenile delinquency. M. Davenport Hill had tried out a kind of probation in Birmingham, the National Reformatory Union had won its case for the grant-aid of reformatories, and an excellent clergyman—Mr. Sydney Turner, a founder member of the S.S.A.—had been appointed as H.M.I. for reformatories. Industrial Schools had been started, and found an able protagonist in Mary Carpenter. This latter cause was particularly interesting, for it was developed, in the main, by practical people—often comparatively unknown—who saw a need and tried to meet it, without undue theorizing. The National Reformatory Union was, in fact, one of the main pressure groups behind the S.S.A.

[1] 1804-1893. Fellow of New College, 1824/56. H.M.I., 1840. Asst. Poor Law Commissioner, 1844/58.

[2] 1810-1886. One of the three original inspectors of schools in 1839. Mathematics Lecturer, Kings College, London, 1833/46. Archdeacon of Salop, 1847/86.

[3] 1793-1863. Surveyor General of Prisons, 1837/42. Inspector-General of Prisons, 1844. Commissioner for Pentonville, 1849. Surveyor-General and Chairman of Directors of Convict Prisons, 1850 to his death.

Public Health.

The 1848 Act was, by now, a dead letter, and Chadwick and Southwood Smith had disappeared from the public eye, but their cause was neither lost nor lacking in supporters. Simon was at the Privy Council and was busy educating local authorities. Farr was at the Registrar-General's office collecting medical statistics. Even Chadwick's enemies were prepared to come to the S.S.A. and talk public health. (Rumsey was a member). Public opinion was on the way to becoming Public Health minded, but the dispute was still alive.

Social and Economic Conditions.

The 'fifties were a comparatively settled period in Poor Law administration. The "New" Poor Law was accepted and its Guardians now experienced; the Benthamite and Chadwickian experiment in irresponsibility had been succeeded by a responsible Poor Law Board. Organized opposition had diminished; it would appear that all that was needed was an improvement in efficiency (the scandals of the 'sixties had still to come). "Less Eligibility" was not only accepted by those who gave any thought to the matter, but it had slowly permeated most thought on social questions and was, almost unconsciously adopted as the very basis of social science; it was to be pushed still farther by the later Poor Law Administration and the Charity Organization Society. The influence of this doctrine has never been fully assessed but few who browse in the social service literature of the nineteenth-century can fail to be impressed by its omnipresence.

The economic field was not only the interest of the theoretical economist, it presented problems of day to day importance in the business world. International exchange and the theory of wages were of importance to the business man on the practical level; the thoughtful industrialist was concerned about the relation between employer and employed under the factory system and it was necessary for him to know more about the nature and consequence of strikes; but the most important thing of all, it would seem, was to get over to

the employee a better appreciation of the Iron Law of Wages and the Theory of Population. Interests such as these were to be found in the Chambers of Commerce, bodies which were very much influenced by Leone Levi.

These issues seem to cover the main interests of the groups which were responsible for the creation of the S.S.A., and even a crude analysis of the members of the Association confirms this impression. The leading figures of the public health movement were there; the leading educationalists were there; the reformers of prison administration and those who were experimenting in methods of dealing with juvenile delinquents took part (the National Reformatory Union conference at Bristol two years earlier may have been the spiritual progenitor of the S.S.A. itself). Many members of Boards of Guardians joined and took part in discussion, and Louisa Twining formed the Workhouse Visiting Society as an integral part of the Association. Industry and Economics were represented by a mixed group, including economists like Danson and Newmarch, bankers and industrialists such as Heywood [1] and Akroyd,[2] and representatives of local chambers of commerce, possibly mobilized by Levi. Apart from groups of this type there was a solid body of lawyers, many of whom were interested in some of these issues, George Woodyatt Hastings,[3] the General Secretary, was a barrister and was interested in everything under the sun. Most of the lawyers were members of the Law Amendment Society founded by Brougham in 1844, and were aiming at some reorganization of the legal system. This group provided some of the most eminent members of the Association.

The members of the original Association can thus be divided into groups already concerned with those fields of activity which were to become the main departments of the Association, *i.e.*

[1] 1810-1897. Banker. One of the original trustees of Owens College. F.R.S., M.P. for North Lancs., 1847/57. Fellow of Trinity College, Cambridge.

[2] 1810-1887. Worsted Manufacturer, Halifax. M.P. for Huddersfield, 1857/59, Halifax, 1865/74. Built All Souls Church, Halifax.

[3] See below, p. 307.

1. Jurisprudence and Amendment of the Law.[1]
2. Education.
3. Punishment and Reformation.
4. Public Health.
5. Social Economy.

III.

Though it had many weaknesses, the S.S.A. was by no means without influence. It was a pressure group as well as a forum, and exerted an influence on the legislation of its day. It was a body of social reformers with limited ideas but very broad terms of reference, and it was pretty confident that almost everything could be accomplished by Act of Parliament. It was, for example, accused from the lofty heights of the *Athenaeum* as early as 1858 of being "crotchety," and of shewing a "craving for further legislative interference, and a desire to enlarge the limits of the functions of government." [2] It was however obvious that the legislation of the day left serious and often tragic lacunae. Public Health legislation was confused and responsibility ill-defined ; married women possessed few property rights ; children could not be protected from the cruelty of their parents ; the law of evidence did not admit of the evidence of the accused ; no public prosecutor existed ; and so on. Brougham had for years been trying to clear up the legal system, and the Law Amendment Society had worked under his aegis. Between them they had by 1857, when the S.S.A. was formed, been instrumental in the enactment of "no less than forty statutes, besides upwards of fifty bills introduced by Brougham at various periods. Great portions of many of the latter have been incorporated into other acts. Others still remain to present to future Law Reformers, or to demonstrate by their admission hereafter into the Statute Book, the sound and reasonable views with which they were originally framed." [3] It was natural therefore that the S.S.A..

[1] Law reform had been in the air for some considerable time. It received further stimulation from Brougham, who had founded the Society for the Amendment of the Law in 1844. A fairly strong body of legal opinion supported him but it could not be called a popular issue.

[2] *The Athenaeum*, 1858, p. 687.

[3] Sir J. E. Eardley-Wilmot, *Lord Brougham's Acts and Bills* (preface).

which emerged from the Society for the Amendment of the Law, and which eventually absorbed it,[1] should wear the mantle of its progenitor.

Each department achieved something, but possibly the most important successes were the appointment of the Royal Commission on Sanitary Legislation in 1869, an important stage in the history of the Public Health Act of 1875 ; and the passage of the Married Women's Property Act of 1870, an act which was badly mauled in the Lords and did not materially alter the situation, but which established the rights of married women to certain types of property, and thus gave recognition to a new principle.

The appointment of the Royal Commission was the result of direct pressure on the Lord President of the Council, the Duke of Marlborough. In 1867 he received a deputation from the S.S.A. bearing a sensible "memorial" suggesting that Public Health legislation should be consolidated and made compulsory, that the local sanitary authorities should be more uniform and better qualified, and that some kind of central control should be imposed.[2] At the Congress which took place later in the year at Belfast, Hastings suggested that the S.S.A. should join forces with the British Medical Association in order to influence the government,[3] and early in 1868 the B.M.A. formed a committee to consult with the S.S.A. The joint committee[4] of the two bodies was unanimously in favour of a Royal Commission and in May a deputation urged the Lord President, the Home Secretary and the President of the Poor Law Board to take this course.[5] In 1869 the Royal Commission was appointed by Gladstone,[6] and it included among its twenty-one members nine members of the S.S.A.[7] This joint committee pursued the Commission while it was sitting and

[1] *Transactions*, 1863, xl.

[2] *Transactions*, 1866, xli.

[3] *The Public Health*, 1. ix. 1868.

[4] With Chadwick in the Chair. *British Medical Journal*, 16. v. 1868.

[5] *Transactions*, 1867, xl.

[6] A Commission was appointed by Disraeli in 1868, but Gladstone appointed a new one after he took office in December. Sir John Simon. *English Sanitary Institutions*, p. 325 *seq.*

[7] *Transactions*, 1868, xxxvi.

reported to both the Associations. After the setting up of the Local Government Board in 1871 it sent a deputation to its President—Stansfeld—suggesting that the bill then before Parliament should include the consolidation of existing law, an extension of local sanitary areas and the registration of sickness.[1] The two Associations could therefore claim, with some justice, that the Royal Commission, and perhaps even the act of 1875 were their creation.

The first bill designed to give to a married woman the property rights of a *feme sole* antedates the S.S.A. by a few months. It was the product of the Law Amendment Society in 1856, and was brought into the House of Commons in February, 1857, by Sir Erskine Perry.[2] It was the S.S.A. which revived it in the late 'sixties, as a result of a petition presented to the Belfast Congress in which the good offices of the Association were requested. The matter was referred to the Jurisprudence Department, which responded by resurrecting the older bill, amending it slightly and arranging for its introduction to the House of Commons by G. J. Shaw Lefevre,[3] Russel Gurney[4] and John Stuart Mill. In the Select Committee in which it was examined, Hastings and Westlake were witnesses as representatives of the Association, which was obviously regarded as an interested body. The Bill passed the House of Commons but, unfortunately, amendments added in the Lords ruined its purpose by leaving most of the common law disabilities untouched, and by circumscribing the right to possess personal property other than wages with difficult conditions. The Married Women's Property Committee, which was a corporate member of the S.S.A., pressed the case, and succeeded in obtaining an amending act in 1874. This did little more than make a husband liable for his wife's *ante nuptial* debts to the extent of the sum he had acquired from her through marriage, and thus removed an odd anomaly in the

[1] *Transactions*, 1872, xl.

[2] Sir John Eardley-Wilmot, *Lord Brougham's Acts and Bills*, 804.

[3] 1831-1928. Son of Sir J. G. S-L. Liberal M.P. for Reading, 1863-85; Bradford, 1886-1906. Occupied various government posts under Gladstone and Roseberry. Founder of Commons Preservation Society.

[4] 1804-78. Son of Sir John Gurney. Recorder of City of London, Conservative M.P. for Southampton. Served on several commissions.

earlier act, but it made possible the sueing of a wife together with her husband for those debts.[1] It was not till 1882 that a fairly satisfactory act was passed, and by that time Hastings himself was in the House, and was a member of the Select Committee considering the bill.[2]

Many other examples of pressure group activity of this type could be produced. The S.S.A. achieved some success with the codification of bankruptcy law. They campaigned for years for the better protection of the intellectual labour of British subjects in foreign countries, a matter which was first raised at the Manchester meeting in 1866 by a *cri de coeur* from Anthony Trollope.[3] They eventually raised a fund for sponsoring a bill which would have cleared up some of the domestic problems in this field. John Westlake, the father of international law in England, was "foreign secretary" of the S.S.A. for most of its life,[4] and influenced its activities towards a study of the conflict of laws. He was supported by eminent members from other countries, such as David Dudley Field of New York, and Senor Arturo de Marcoartu of Spain.[5] Patent Law ;[6] the registration of land titles ;[7] appeals from County Courts[8] and many other aspects of law were discussed both in Congress and in Committee.

The section concerned with the prevention of crime was also active, and in the first few years of its existence many papers were read on such subjects as convict discipline. It acted as an alert watchdog against official reaction, in spite of the fact that Sir Joshua Jebb, the arch exponent of new-fangled experiments, was a member and occasionally

[1] *Transactions*, 1870, 242, 549. 1875, 265. The 1870 Act exempted a husband from responsibility for his wife's *ante nuptial* debts with disastrous effect on the credit of affianced women.

[2] Clifford-Smith. *The Social Science Association*, p. 51.

[3] *Transactions*, 1866, p. 119.

[4] He was first appointed in 1862 and held the post to the end.

[5] Senor de Marcoartu financed a prize for an essay on the formation of an international code. D. D. Field actually made a preliminary draft of such a code. *Transactions*, 1872, xxxvi ; 1874, xli.

[6] *Transactions*, 1868, xxxvi.

[7] *Transactions*, 1874, xxxvii. Torrens, the exponent of land registration, was an active member of the Association and served on the Council.

[8] *Transactions*, 1875, xxxii.

joined battle with Sir Walter Crofton on these issues. There was, for example, in the early 'sixties a move for the re-introduction of transportation [1] which so disturbed the Council of the S.S.A. that it called a special meeting of the Association, where Hastings moved a resolution condemning the policy.[2] The S.S.A. was also, in some measure, responsible for the creation of the office of Director of Public Prosecutions [3] in 1879, and it pressed constantly for a revision of the law of evidence which would admit of the evidence of the accused. One of the acts marking a stage in the development of our modern practice in admitting evidence was drafted by Hastings for the Law Amendment Society,[4] and the case for it was supported by an extensive survey of practice in the British Dominions and the United States.[5]

The Health Department pressed for legislation concerning adultered foods, and legislation in 1860 designed to deal with this problem owes much to this pressure.[6] Gavin Milroy,[7] a doctor who took an active part in the affairs of the Association, had, during service with the Crimean Sanitary Commission,[8] been impressed with the inadequate and obsolete character of quarantine legislation and practice, and the S.S.A., under pressure from him, had constantly urged the government to do something about it. The Council even formed a quarantine committee. The Association was also concerned about baby farming and agitated for the registration of still-born children. Chadwick claimed that it was a paper read by him at the

[1] Grünhut. *Penal Reform*, 80/81.

[2] *Transactions*, 1863, xxxi.

[3] *Transactions*, 1870, xxxv ; 1872, xxxix ; 1877, xxxv ; 1879, xlvii.

[4] Clifford-Smith. *The Social Science Association*, 88. The reference is to the act of 1869, which admitted the evidence of plaintiffs and defendants in actions for breach of promise, and co-respondents in divorce cases instituted in consequence of adultery. It also admitted evidence from witnesses refusing to take the oath for conscientious reasons.

[5] *Transactions*, 1876, xxxv.

[6] *Transactions*, 1857, p. 483 ; 1859, xxx.

[7] Superintendent Medical Inspector to the General Board of Health, 1849/50 and 1853/5. Not to be confused with Dr. Hector Gavin, another Inspector of the G.B.H.

[8] *Transactions*, 1858, p. 521 ; Clifford-Smith, 109/10.

Liverpool meeting in 1858 which was responsible for the setting up of the Indian Army Sanitary Commission.[1] The threatened epidemic of cholera in 1865 brought forceful suggestions from the special committee of the Health Department set up for this purpose ; again in 1872, when another epidemic threatened, the President of the Local Government Board was urged to take precautions in time.[2] Working-class housing ; [3] safety in mines ; [4] water supply ; [5] slaughter houses ;[6] notification of infectious diseases,[7] all had their place, and each important discussion was followed by a resolution to the Executive Committee, which was then bound by the practice of the Association to take some kind of action.[8]

The other departments do not seem to have accomplished quite so much. The Education Department, for example, has comparatively little legislation to its credit. Well over four hundred papers were read during the Congresses alone ; but even Clifford-Smith [9] makes no attempt to claim Forster's Education Act for the S.S.A. The Department watched the bill and made suggestions, one of which, the appointment of a "Minister of Education" has a distinctly modern ring, as responsibility for education was then, and was to remain for nearly thirty years, divided between the old office of Vice-

[1] *Transactions*, 1881, p. 498. (Paper by Chadwick).
[2] *Transactions*, 1865, xxxii, 374, 413, 415, 468 ; 1872, xl.
[3] *Transactions*, 1865, xxxix ; 1866, p. 425 ; 1875, xxxv.
[4] *Transactions*, 1872, xl.
[5] *Transactions*, 1874, p. 75.
[6] *Transactions*, 1874, xl.
[7] This was a hardy annual in most of the Congresses from 1875 on. It was raised at the Brighton Congress of that year. The S.S.A. were among the earlier advocates of compulsory notification and a spate of discussion followed the Brighton meeting. The S.S.A. and the B.M.A. together advocated compulsory notification but this, unfortunately, did not become universal till 1889. The activity of the two Associations resulted in the standardization of the notification clauses in the private bills then being promoted by many municipalities. See *Transactions*, 1875, 6, 8, 9, 80, 81.
[8] *National Review*, 1884, p. 766. Paper by Sir Richard Temple on the S.S.A.
[9] The last secretary of the S.S.A.

President of the Council and other departments.[1] As would be expected, the organization also shewed considerable interest in the education of women, and the *Transactions* claim that the S.S.A. was ("in concert with a special committee of ladies") instrumental in opening the Cambridge Local Examinations to women, and that it ran the first experimental examination in 1863.[2] Nassau Senior pursuaded the association in 1863 to send a deputation to Lord Palmerston to request the appointment of a Royal Commission on middle-class education. Palmerston readily agreed and a Commission was appointed. Its report provided the basis for the Endowed Schools Act of 1869.[3]

The Department of Economy and Trade, though it was supported by many able members (Henry Fawcett, Leone Levi, William Stanley Jevons, Thorold Rogers, Nassau Senior appear in the *Transactions* from time to time), does not appear to have produced much in the form of action, with one notable exception, the report on strikes of 1860. This was a monumental document of 640 pages and it is as its publisher that the S.S.A. is known to-day. The Webbs tribute to this investigation appears only as a footnote in their *History of Trade Unionism*,[4] but the praise is of such a level that it is worth quoting. "This inquiry, conducted by able and zealous investigators, resulted in 1860 in the publication of a volume which contains the best collection of Trade Union material and the most impartial account of Trade Union action that has ever been issued. As a source of history and economic illustration this *Report on Trade Societies and Strikes* (1860) is far superior to the blue books of 1824, 1825, 1838, and 1867 to 1868."

[1]The use of the word "Minister" in this way is interesting for though the government consisted of the Queen's Ministers, none of them were "Ministers" of anything. Those of them who did not bear traditional titles were Secretaries of various kinds, or Presidents of Boards. There were no "ministries" till the first World War. See W. J. Mackenzie in *British Government since* 1918, pp. 60/1.

[2]*Transactions*, 1863, xxx.

[3]*Transactions*, 1869, xxxiii.

[4]p. 227/8.

In 1867 the Council called a special meeting under the presidency of Gladstone, for the purpose of "promoting an amicable adjustment of differences between employers and employed." [1] A Committee was appointed which drew up a series of resolutions explaining its purpose, and the following year provided the following public lectures :—

The True Scope of Economic Science ..	W. B. Hodgson
Identity of Interests of Employers and Workpeople	F. Hill
Competition	W. B. Hodgson
Reciprocity	R. H. Hutton
On Industrial Partnerships	Wm. Stanley Jevons

This committee also functioned, it would appear, as unofficial conciliators and attempted to settle strikes. Their success would seem to be slight, though Mundella, who had organized a successful conciliation scheme in Nottingham, had himself assisted in the work.[2] The Economics Department can also claim that it was a paper read at the Bradford Congress in 1859 by C. W. Sikes [3] that first suggested the use of the Post Office as a savings bank, or rather as the agent for the tranmitting of money to and from a central savings bank. The prompt adoption of this suggestion by the Chancellor of the Exchequer was the first step in the metamorphosis of the Post Office.

The S.S.A. also had a considerable local influence. The Congresses were popular features in the civic calendars of the cities in which they were held. Most cities were prepared to guarantee the S.S.A. against loss or even to contribute towards the local expenses. Nottingham, for example, in 1882 undertook the sole financial responsibility for the local organization and voted £1,500 for the purpose.[4] It is true that the S.S.A. gave something in return. Hastings claimed as early as 1861 that "a higher tone of municipal government, a more active attention to sanitary and other civic matters, an impulse given to efforts for the prevention of evil, and the spread of practical

[1] *Transactions*, 1867, xlii.

[2] *Transactions*, 1870, xxxvi ; 1871, xxxviii, xxxix ; 1872, xli ; 1873, xxxvii.

[3] 1818-1889. Huddersfield Banker. Life long leader of savings movement.

[4] *Transactions*, 1882, xxxiii and *British Medical Journal*, 11, ii, 1882.

improvements, have been the monuments raised by the Association of its brief but busy presence. In each town we have left behind a body of men animated with the desire to carry out the ideas they have received, who become in turn the sources of fresh knowledge to others." [1] This may seem an extravagant claim for a four-year old, but there was some truth in it. The visit of the Congress put the local prison and public reformers, the educationalists and the Chambers of Commerce, on their mettle, frequently to good effect. Local organizations brought forward special papers concerning local affairs and social conditions. Sometimes special investigations would be undertaken in preparation for the Congress, and frequently papers would be read giving detailed accounts of the local situation in the field of public health, education and so on. In Ireland and Scotland these would be extended to include an examination of the effects of different types of legislation and different legal systems. At the Dublin Congress in 1861, for example, papers were presented on "The Law of Marriage and Divorce as at present existing in England, Ireland and Scotland," "The Irish Bankrupt and Insolvency Act"; these were subjects in a somewhat technical field, but they were supported by discussions of the "Sanitary Condition [2] of the Labouring Classes in Ireland," "The Dwellings of the Poor in Dublin," "Drainage of the City of Dublin." [3] At the Aberdeen meeting in 1877 a paper was read entitled: "How can the Sanitary Condition of the Populations engaged in the Coast Fisheries of Scotland be improved?" another by Sheriff Watson, the respected founder of reformatory schools, on "Crime in Scotland," and the Health Department closed with an address from Chadwick on the "Sanitary Condition of Aberdeen." [4]

[1] *Transactions*, 1861, xix.

[2] The use of the term "condition" in this way was common in Victorian England, though sometimes it changes places with "state." This usage has died out of our social science vocabulary; it would be odd to find a modern paper entitled "The Condition of Young Women Employed in Manufactories in Dublin."

[3] *Transactions*, 1861, pp. 191, 248, 593, 595.

[4] *Transactions*, 1877, pp. 515, 527, 312.

Papers like these must have given a stimulus to local progress, and the local organizations and societies upon whom the responsibility for the provision of material of this type would rest, would be encouraged to action by the approach of the Congress. For the 1866 Congress in Manchester, the Manchester Statistical Society commenced its preparations towards the close of 1865 by appointing a committee to consult with Hastings. They circulated later a questionnaire to local authorities in order to gain material shewing the industrial expansion of the North ; this attempted survey, unfortunately met with such a poor response that it was not proceeded with.[1] On some organizations the influence of the Congress was more direct. In Dublin, in 1861, the Dublin Statistical Society provided the presidents of two departments, in Thomas O'Hagan [2] and Mountifort Longfield,[3] and one of the local secretaries in its founder, Wm. Nielson Hancock.[4] No fewer than twenty papers were read at the Congress by members of the society. The society was, moreover, so much impressed by the S.S.A. that it carried out a radical internal reorganization in the following year ; it added Social Science to its official objects, admitted ladies as members, divided the society's business into three departments,[5] and also changed its name to the Statistical and Social Inquiry Society of Ireland, the title that it now bears. This change heralded a new and successful era in its history ; the results were not so happy when it reorganized itself again in 1881, after the second Dublin Congress and even more slavishly aped the S.S.A.[6]

[1] *Proceedings of the Manchester Statistical Society*, 1865-6.

[2] 1812-1885. Attorney General for Ireland. Later Lord Chancellor of Ireland. He was president of the S.S.A. in 1881.

[3] 1802-1884. First occupier of the Whately Chair of Political Economy at Trinity College, Dublin. He later reverted to his first love—the Bar.

[4] 1820-1888. Another barrister who occupied the Whately Chair. He also held, simultaneously, the chair of Jurisprudence and Political Economy at Belfast.

[5] I. Jurisprudence and Amendment of the Law including the subject of Punishment and the Reformation of Criminals. II. Social Science including Education ; Political Economy including the principles of Trade and Commerce. III. Public Health and Sanitary Reform.

[6] R. D. Colleson Black. *The Statistical and Social Inquiry Society of Ireland.* Centenary Volume, 1947, pp. 17/20, 33/4.

There was, of course, opposition as well as support for the S.S.A. A large section of opinion agreed to ignore it, and the strange new cult of which it was the high priest was not everywhere acceptable. The *Atheneum* mentions it for a few years and then no more. The *Journal* of the Royal Society of Arts refers to the congresses for about five or six years, and then quotes it only when a paper of importance was read, and the number of suitable journals such as the *Economist* in which it received scant notice or none at all is large. The medical press was sympathetic and the *British Medical Journal*[1] and the *Lancet* are among the few periodicals which record its demise, but it would appear that it was never looked upon with any special favour by the organization upon which it had modelled itself, the British Association. Contemporary literature shews the occasional sneer; Sir James Fitzjames Stephen, for example, in denouncing "fraternity" in "Liberty, Equality and Fraternity"[2] suggests that it is a "progress towards a huge Social Science Association." In "Gryll Grange," as the Pantopragmatic Society, it is set up as the target for Peacock's darts;[3] there, Brougham is lampooned as Lord Michin Malicho, Russell as Lord Facing-both-ways, and Lord Curryfin[4]—the "Lecturing Lord" who lectured on Fish—would appear to be Lord Curriehill who contributed papers to the Congress of 1860. Through the "Rev. Dr. Opimian" Peacock describes the new science of "Pantopragmatics" as "a real art of talking about an imaginary art of teaching every man his own business. Nothing practical comes of it, and so much the better. It is at least harmless as long as it is like Hamlet's reading 'words, words, words.' Like most other sciences it resolves itself into lecturing, lecturing, lecturing, about all sorts of matters, relevant or irrelevant; one enormous bore prating about

[1] *British Medical Journal*, 26, vi, 1886.

[2] p. 306. Stephen had, himself, contributed papers to the S.S.A.

[3] Thos. Love Peacock. *Gryll Grange*, 1861. The S.S.A. occupies the centre of the stage as an object of Peacock's sarcasm in this work.

[4] In his recently published book, *The Life and Times of Sir Edwin Chadwick*, p. 488, S. E. Finer suggests that Lord Curryfin is meant to be Lord Ebrington. This is a more satisfying identification as far as character is concerned, but Ebrington had read no papers at the S.S.A. by the time *Gryll Grange* was published.

jurisprudence, another about statistics, another about education and so forth, the *crambe repetita* of the same rubbish which has already been served up "twiës hot and twiës cold" at as many other associations named scientific." Later on he refers to "the astounding march of intellect, drumming and trumpeting science from city to city."

IV.

Worship at the shrine of a generalized "social science" was one of the objects of the Association, and the Secretary (in his introduction to the first volume of the Transactions) produced a wonderful *sorites* in which he attempted to prove that the growing incidence of crime was due in part to our antiquated system of conveyancing.[1] This may have been nonsense, but its blithe hopefulness and assurance called the tune played by the association. In so far as the S.S.A. possessed a philosophy it is this which was its greatest weakness. Two important groups would appear to have been absent from its membership, the "Positivists" and those who wished to reorganize society. For the former it can of course be claimed that Mill had flirted with Comte, but his positivist period had passed by the time the S.S.A. was formed, and he did not remain in the Association for long. Few, if any, positivists seem to have been present, and Comte's word "Sociology" does not appear in the Association's vocabulary. Furthermore, few of the papers shew signs of interest in Comte's search for a really scientific "science of society," largely because their writers seemed to think that they had found it. This confidence, also explains the absence of the revolutionary reformer and possibly the demise of the Association itself. The S.S.A. took the existing framework of society as given, and its only concern was with reforms which could take place within this framework. An interesting example of this appears in the report of the Council in 1863, where it is proposed that the Department of Punishment and Reformation should be embodied, as a sub-section, in that of Jurisprudence and Amendment of the Law, a constitutional alteration which

[1] *Transactions*, 1857, xxii, xxiii.

> "would, we think, be justified by the decrease in its legitimate business which has already taken place, and may be expected to continue, now that the prominent questions relating to the treatment of prisoners whether adult or juvenile, *are either solved, or in process of solution.*" [1]

Such an attitude ruled out all political groups supporting radical reforms. Socialist theories, even the mildest of them, were not discussed, and the communist manifesto had no existence for the S.S.A. The working-classes were not ignored and at each Congress a special meeting was arranged for them, but those who came tended to be the working men of Brougham's Mechanics Institutes and of the successors to the Society for the Diffusion of Useful Knowledge.[2] The special committee which was set up in 1859 to investigate industrial disturbance,[3] of which Applegarth [4] was a member and which produced one of the few documents by which the S.S.A. is remembered, may seem to be an exception, to this, but within a year or two the annual *Transactions* treated a paper by Wm. Dronfield, the Sheffield compositor, in such a churlishly cursory manner [5] that he abandoned hope of working through the S.S.A., and became one of the leaders of the movement which led to the formation of the first Trade Union Congress in 1868, the summons to which specifically states that:

[1] My italics. Miss Margery Fry, in *Arms of the Law* complains that this was a frequent misapprehension in the history of penal reform.

[2] The "Steam Intellect Society" of Peacock.

[3] *Transactions*, 1859, 712.

[4] Secretary of the Amalgamated Society of Carpenters and Joiners. One of the "Junta," member of the Royal Commission on the Contagious Diseases Acts. He later became an agent for a firm of diving apparatus manufacturers and eventually acquired the firm himself.

[5] Under the title "What are the best means of establishing a system of Authoritative Arbitration between Employers and Employed in cases of Strikes and Lockouts?" a paper was read by a John Wilson, a life-long opponent of unionism, denouncing the unions. The paper by Dronfield defending unions was not printed and was referred to only in the account of the discussion (in another part of the volume) in the following words :—"In addition to the paper by Mr. Wilson, printed at page 476, Mr. Dronfield read a paper pointing out the advantages of Trade Unions." *Transactions*, 1865, pp. 518/9.

> "the Congress will assume the character of the Annual Meetings of the Social Science Association, in the *Transactions* of which the artisan class is almost excluded." [1]

Another serious weakness lay in the Association's lack of appreciation of the inductive problem as it affects the social sciences. The word "science" bore a slightly different connotation in the mid-nineteenth century from that which it bears to-day. The modern social scientist is conscious of the fact that the scientific process involves the inductive problem inherent in any attempt to establish general laws from a study of particular instances ; and he realizes, too, that the virtual absence of the laboratory experiment from his armoury, the immense difficulty of isolating relationships, and the catalytic effect of his own presence in the investigation, must, in themselves, make him wary of over-impetuous generalizations. Statistics, when they were produced at S.S.A. congresses, were nearly always used to underline a point, and seldom to point the way to one, and paper after paper is filled with *a priori* arguments. This attitude is best seen in a passage written by Hastings in 1858 :

> "For the ultimate success of such an undertaking" (the formation of the S.S.A.) "as much reliance was placed upon the actual experience of social reformers as on that *a priori* reasoning which would probably strike any thinker on the subject." [2]

The ambivalence in this attitude is interesting. On the one side there is a genuine attempt to learn from the experience of workers in the field, a rough sort of inductive process, on the other there is unshaken faith in the possibility of a purely deductive social science.

The failure even to question its own presuppositions was the consuming weakness of the S.S.A., but in areas where these presuppositions mattered little, or where the goal was limited and clear, as in some fields of social work, the papers often contained valuable ideas. Mary Carpenter's plea for grant aid for Industrial Schools is well argued and apt.[3] Torrens's call

[1] S. & B. Webb, *The History of Trade Unionism*, p. 738.
[2] *Transactions*, 1857, xxi.
[3] *Transactions*, 1858, p. 305.

for a simpler system of conveyancing [1] (which we have not yet achieved) was reasonable. But both sense and nonsense could come from the pen of the same person. The Recorder of Birmingham, as has been mentioned, had experimented with probation and was interested enough to give considerable thought to the human factors in our penal system. He wrote a paper in 1857 [2] describing the prison system in Ireland under Crofton's administration which was a competent enough appraisal of the improvements achieved by the "intermediate prison" and the "progressive stage" system. Yet a paper written some years later on the treatment of life prisoners shews a ludicrous Alice in Wonderland logic. He argued that those serving life sentences would only be the worst criminals and, therefore, must receive no better treatment than any other prisoner. It would however be unkind to extinguish hope altogether. Some kind of progressive amelioration of their lot should be possible, so that they would arrive at the same level of amenity as the ordinary prisoner only after some time. But in order to achieve this they must enter prison on worse terms than those of any other prisoner and they should

> "for a period more or less considerable, be placed in irons, heavy at first, as heavy indeed as nature can support; yet to be promptly lightened by good conduct; until at last they are reduced to one ring; and even that one may eventually be withdrawn." [3]

V.

The S.S.A. held its annual Congresses in most of our major cities continuously from 1857 to 1884, and it is interesting to note that it came to life and died in the same town—Birmingham. This Birmingham meeting shewed no signs of the break-up which was imminent. It was, on the contrary, better attended than those of the previous two or three years, and more tickets were sold in advance than had been sold altogether for the previous meeting in Huddersfield.[4] But

[1] *Transactions*, 1872, p. 159.
[2] *Transactions*, 1857, p. 262.
[3] *Transactions*, 1866, p. 213.
[4] *Manchester Guardian*, 18, ix, 1884.

financial difficulties had been present for some time and the annual reports of council had begun, around 1880, to show bills being left over for payment later on. The printer's bill, always a major item, since it bore the burden of the *Transactions*, had not been paid promptly since 1880. The account accumulated till in 1885 the total cost of the 1884 *Transactions* had still to be met and only £100 had been paid on account for the Transactions of 1883. The subscription list had contracted noticeably since 1880, and in 1882 reached its nadir with only £517. 9s. This was the year in which the S.S.A. celebrated its 25th anniversary, and in which the secretary—J. L. Clifford-Smith—produced a small volume chronicling the history and achievements of the Association.[1] It was also the year in which the Association found it necessary to sell part of the library for nearly £600 in order to meet its bills. The slight rise in subscriptions during the next two years did not redress the unbalance in the accounts.[2]

A Congress was planned for 1885, and was under consideration as late as February of that year, when Bath was substituted for Portsmouth as the venue.[3] Between February and June a change of policy took place, and in the latter month it was announced that no Congress would be held that year.[4]

The excuse given was that a general election was to be held in October (the usual month for the Congresses) and would probably affect the attendance. The excuse is not quite as lame as it sounds for a general election, on the newly extended franchise, would seriously involve those many members of the S.S.A. who were M.P's. It was nevertheless pretty lame, and certainly concealed the real situation, which is better revealed in the report of the Annual General Meeting of that year. On a motion from the chair, it was agreed that :

[1] *The Social Science Association*. This is a useful guide to the activities of the Association but contains little that cannot be found in the Transactions.

[2] *Sessional Proceedings*, 1880-1885.

[3] Portsmouth had refused to give a financial guarantee to the Congress because it was guaranteeing the Church Congress of the same year. There seems to have been some misunderstanding about the amount of this guarantee. Portsmouth reported it as £8,000, but Clifford-Smith gave it as only £800, a more reasonable figure. The *Times*, 12. xii. 84, and 25. ii. 85.

[4] *Sessional Proceedings*, 1885.

(*a*) Expenses should be kept within probable annual income.
(*b*) Sessional meetings[1] should be curtailed.
(*c*) The Congresses should be the main activity.
(*d*) The lease of the premises in the Adelphi should be disposed of.
(*e*) More books should be sold.
(*f*) The paid secretary should give way to an unpaid one, if such could be found.[2]

The decision to abandon the annual Congress for 1885 was an extremely important one. The Congress had never been postponed in the past and it was, without doubt, the most effective public platform for the Association. It is easy in these days, when the S.S.A. is not even a memory, to forget that its Congresses were important events. Birmingham, even in 1884, redecorated its City Hall for the occasion ; Trinity College, Dublin opened its doors and gave hospitality ; one of the London Congresses was given the unique honour of a reception in Westminster Hall, and the whole Palace of Westminster was opened to them. It had been hoped that the Prince Consort would preside on that occasion.[3] Other cities received the Association with equal dignity ; Bishops preached inaugural sermons ; and the *Times* and the *Guardian* reported the daily activities and proceedings at great length, and supported the news columns with grave though sometimes critical leaders. This was, therefore, an important decision, and some alternative had to be offered. This took the form of a meeting in London in 1886, at which the brewers and temperance societies were brought together to discuss temperance legislation.[4] As far as the press reports go this extended sessional meeting was tolerably successful, but within two months—on April 16th—the Association came to an end.[5]

[1]Meetings held in the S.S.A. Offices and library in London in between Congresses.
[2]Report of the Annual General Meeting, 1885.
[3]This was in 1861. The Prince died in December and had been ill during most of the year.
[4]A special report of this meeting was published, but it was also reported widely in the press.
[5]The *Times*, 17. iv. 1886.

The motion was moved by a vice-president, G. W. Hastings, who had been the first secretary in 1857, chairman of the council since the death of Brougham in 1868, president of the 1882 Congress, and of whom it can almost be said that "he was the S.S.A."

Legislation on licensing was being discussed at the time and within four years the Local Government Bill of 1888 and the budget of 1890 made provision for reducing the number of license holders, and for compensating those whose licenses were withdrawn.[1] There was a sharp division of opinion on the subject and it had been an important political issue for over ten years. A strong pressure group in the cause of temperance existed within the S.S.A. itself, and in 1885 it was suggested that a "Temperance" department should be added to the other five.[2] The subject was an important one, but its choice underlines a certain unreality in the outlook of the Association. The executive committee had been instructed to call a meeting in London which would "discuss some subject or subjects to which, in view of the opening of a new Parliament it may be considered desirable to draw attention," and, had its outlook been less circumscribed, more important issues could have been found. In 1886 the Parliament of the 1884 Reform Act had met ; the Fabian Society had been in existence for two years ; Charles Booth was preparing his famous survey ; the Social Democratic Federation was organizing "hunger marches" of the unemployed.[3] The 'eighties were a turning point in social and political ideas and the S.S.A. did not see the change that was taking place. It was out of contact with the new thought. To its members the basis of society was given ; they were the Schoolmen of the nineteenth century, and were blind to new trends which might question their assumptions, including those trends which were to result in the rise of the Labour Party.

[1]The money voted for this purpose under the Budget of 1890 was never so used. It was called the "whiskey money" and was used for financing technical education.

[2]*Sessional Proceedings*, 1865.

[3]Almost as the conference was sitting, in Burlington House, the police were breaking up a large meeting of 50,000 unemployed at the other end of Piccadilly. Ensor, *England*, 1870-1914, p. 101.

The *Times*, in November, 1884, pointed out a further weakness within the Association. When the S.S.A. opened its doors in 1857, it combined in one organization a number of groups with different social interests. Some of these groups had by now set up their own organizations which served their purposes more effectively than did the large, amorphous, omnibus Congress. The Poor Law Guardians had set up their own organization, on a regional basis ; special conferences had dealt with neglected children and other problems ; a conference of hospital managers had set up an association devoted to hospital administration, and so on. It is true that the S.S.A. had often provided the platform on which these issues were first ventilated. It was, for example, a paper by J. B. Curgenven at the Congress in 1867 that was responsible for the establishment of the Infant Life Protection Society,[1] and many members of the S.S.A., including Hastings, supported its efforts to eliminate baby farming. Nevertheless, breakaways like this did not strengthen the parent body.

VI.

No historical note on the S.S.A. would be complete without some comment on George Woodyatt Hastings, who was the driving force behind the organization during the whole of its existence. He was born in 1825, the son of a very well-known doctor, Sir Charles Hastings,[2] and was educated at Bromsgrove Grammar School and Christ's College, Cambridge, where he read law and graduated in 1849. He was called to the bar in 1850 and was a prominent member of Brougham's Law Amendment Society (founded in 1844) and for a time its Honorary Secretary. He was also interested in the National Reformatory Union, founded in the early 'fifties, and was also its Honorary Secretary. He was one of the leading sponsors of the S.S.A. in 1857 and was its General Secretary from the outset until the death of Brougham in 1868 ; he then became

[1] *Transactions*, 1867, p. 531.

[2] 1794-1866. Founder of the British Medical Association. He was the first secretary of the B.M.A. and was appointed Perpetual President in 1843, a post which he combined with the Treasurership till just shortly before he died.

Chairman of the Council and retained that position till 1882. He lived in Worcestershire and Herefordshire, and was a figure of considerable local importance, a Justice of the Peace, Vice-Chairman of the Quarter Sessions for Worcester, Deputy-Lieutenant for Hereford, Chairman of the first Worcester School Board and a Director of the Worcester, Bromyard and Leominster Railway. He was Liberal [1] Member of Parliament for East Worcestershire from 1880-1885 and for the East Division of Worcestershire from 1885 onwards. He was a member of the British Association and the Royal Society of Arts (he was the Cantor Lecturer in 1865/6) ; and the British Medical Association in August, 1866, suspended its regulations in order to admit him to honorary membership.[2]

Hastings must have been a man of considerable ability and energy. During the life of the S.S.A. he was a member of almost every committee of that very much over-committeed body. He was the keystone of its administration, and he also read a large number of papers to the Congresses and took part in many discussions on papers by others. His own papers were of doubtful value, and his conception of social science would seem odd to modern minds, but it was no odder than the ideas of many of his contemporaries. It would seem from this that he should have secured a niche for himself among the minor celebrities of the Victorian age.[3] Nevertheless, history in its wisdom has passed him by, perhaps because in 1892, at the age of 66, he was sentenced to five years' penal servitude for the fraudulent conversion of a trust fund. The circumstances were unhappy, but the guilt was clear and he made no defence. The capital of the trust, for which he remained solely responsible after the death of a fellow trustee, had dwindled from £28,000 to £7,000 in a matter of six years. He was expelled from the

[1] He became a Liberal Unionist and was a member of the railway directors "cave." See *Mundella* by A. J. Armytage.

[2] This was partly a tribute to his father, but he, himself, had rendered useful legal service to the B.M.A.

[3] His name does not appear in the D.N.B., the Lynds book, the 80's, or even in that treasure house of Victorian biography—Boase, *Modern English Biography*. Standard histories like Woodward and Ensor also ignore him.

House of Commons, which then had to find a new chairman for the Police and Sanitary Regulations Bills Committee.[1]

The S.S.A. seems partly to have foundered on the rock of Hasting's personality. That he possessed administrative ability is clear. It is also clear that he lacked financial sense, for the first drastic attempt [2] to salve the finances of the Association coincided with his resignation from the Presidency of the Council, and the following year saw an amendment to the Constitution which would prevent the permanent occupation of that position.[3] He was demoted upstairs to the position of a Permanent Vice-President.

His lack of a sense of financial responsibility was also shown at his trial, at which he displayed remarkably little contrition. He pointed out that he had not intended to defraud, that he had always paid the interest, and that if the authorities had not arrested him he would have sold "a very valuable patent" and put everything in order. His speech concluded with the words "that whatever else might happen, it would be a satisfaction to him that he had spent his labour and his health in endeavouring to benefit his country." This was true, and it was a tragic irony that so much of his time had been spent in discussion of prison administration and the causes of crime.

VII.

It is perhaps natural that its activity in the field of law amendment should be the S.S.A's strongest claim to the fame which did not come its way, for it owed so much to Brougham and to his associates. Nevertheless its influence in other fields was not negligible and deserves more recognition than has been accorded to it. As a pressure group it was not, of course, in the same class as the Benthamites preceding it, nor did it influence future events as effectively as the Fabians who followed it; it was not only too large to exert the subtler influences characteristic of these groups, but it lacked their

[1] The *Times*, 11. iii. 1892. 11. iv. 1892. *Hansard*, 1892, vol. 2, pp. 735, 864, 1075, 1339/42.

[2] *Sessional Proceedings*, 1882.

[3] *Sessional Proceedings*, 1894.

intellectual vigour, ability and originality. It would tinker with existing problems but was closed to revolutionary thought. Much of this tinkering, however, was useful and should be credited to the S.S.A. for virtue. As a forum its influence was less direct, but that it did exert an influence is certain and can be seen in the many papers describing local conditions which were called forth by the visit of the Congress.

The papers embodied in the *Transactions* also deserve more attention than they have received. Many of them are very poor, and many more contain undisclosed presuppositions. Nevertheless some papers are good and contain valuable data, and the *Transactions* as a whole give to the modern social scientist a useful picture of the mid-nineteenth century approach to social problems, and what is more, of what Victorian England thought those problems to be.

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An Eighteenth Century Controversy in the Theory of Economic Progress

The object of this paper is to consider a controversy of positive economic theory which developed as a result of the publication of the *Political Discourses* of David Hume in 1752. Inevitably, however, normative judgments were introduced into what was essentially a disagreement on a question of facts and it will not be possible to exclude them here. It is true that from the point of view of the 20th Century historian the policy recommendations are usually the more interesting, yet to consider them independently of the factual hypotheses upon which they were originally based is to convert the history of economic ideas into an unedifying series of doctrinal revolutions, devoid of significance for the present.

II.

Hume's reputation as an economist has had a chequered career. At different times he has been, a pioneer,[1] a synthetist,[2] and a near-plagiarist ; [3] it is not my intention to add another label to his name but to investigate Hume's ideas on the theory of economic progress of an internationally trading community, and the repercussions which they produced on a small group of his personal friends, in the hope that this will help to elucidate our understanding of the momentous changes which were taking place in economic theory in the middle years of the 18th century. The group is very narrowly defined, and although it does include Adam Smith, I do not pretend to consider the contribution which he made to the discussion in the *Wealth of Nations*. In doing this I do not, in any way, wish to denigrate that work but merely to set out some

[1]E. Dühring, *Kritische Geschichte der Nationalökonomie und des Socialismus*," 1871, p. 122. J. Hill Burton, *Life and Correspondence of David Hume*, 1846, Vol. I, p. 354. Lord Brougham, *Lives of Men of Letters*, p. 204.

[2]E. A. J. Johnson, *The Predecessors of Adam Smith*, 1937, p. 161.

[3]Karl Marx, *Theorien über den Mehrwert*, ed. Kautsky, 1905, Vol. I, p. 79 *Capital*, Glaisher ed., 1920, Vol. I, p. 99 note.

of the important influences which must be borne in mind when one attempts to interpret it and assess its importance.

III.

The story begins in the spring or summer of 1750 when Hume sent a draft of his essay "Of the Balance of Trade," to his friend James Oswald of Dunnikier. Our knowledge of Oswald is small.[1] He and Adam Smith were brought up together in Kirkcaldy and later he became an intimate friend of David Hume.[2] By profession, Oswald was a politician and occupied a succession of minor offices at the Board of Trade and the Treasury, in which positions he gained a reputation for ability and hard work.[3]

Both Smith and Hume valued him highly as an economist, but except for one long letter to Hume we have no direct evidence of his ability. This single letter, however, turns out to be quite important for it contains Oswald's criticisms of Hume's draft.[4]

Unfortunately we do not know, directly, the contents of this draft, but it is not difficult to deduce that it must have been very similar to the final published version.[5] The object here was to dethrone money, to demonstrate that money is

[1] *The Memorials of the Public Life and Character of the Rt. Hon. James Oswald of Dunnikier*, 1805, consists of 142 letters, all that remains of his papers. They are not of great interest to the economist. See also W. R. Scott, *Adam Smith as Student and Professor*, 1937, p. 395.

[2] J. Y. T. Greig, *The Letters of David Hume*, 1932. *Letter* to Johnstone, 27th November, 1745.

[3] H. Walpole, *Memoires of the last ten years of the reign of George II*, Vol. I, p. 51.

[4] Published in *Selections of the family papers at Caldwell*, 1854, by the Maitland Club of Glasgow. The letter was written October 10th, 1750. It fills pp. 93-107 of Vol. I, Pt. II. The letter has long been known to exist, but it has been commented on only superficially. See Greig, Vol. I, p. 142 and J. Rae, *The Life of Adam Smith*, 1895, p. 38. Oswald is reputed to have given Smith the idea of dividing the value of any good into the wages of labour, profits of stock, and the rent of land; see Dugald Stewart, *Works*, 1856, Vol. IX, p. 6. Scott discusses this point, pp. 117-8. See Dugald Stewart, *Account of the Life and Writings of Adam Smith*, in 1811 edition of *Smith's Works*, Vol. IV, p. 461. For Hume's opinion of Oswald's ability. *Letter* to Mure, August, 1744, and to Oswald, June, 1753.

[5] From Oswald's remarks and a *Letter* to Montesquieu, April 10th, 1749, on the same subject.

merely a veil ". . . the oil which renders the motion of the wheels more smooth and easy . . . " [1] with no great influence on the "real" economy. The method adopted was the unconvincing one of a reduction to absurdity.

Suppose that the quantity of money in England was increased five-fold overnight : [2] would not the prices of labour and goods rise until they were ". . . proportioned to the plenty of money . . ." [3] ? This Hume took to be self-evident.

The consequences, he thought, were crushing : it meant that not only was it unnecessary for a government to concern itself about the state of the balance of trade [4] but that it was impossible for the balance to be continuously favourable (or continuously unfavourable) and that, hence, efforts to secure such a result could never succeed unless a country was prepared to isolate itself completely from the rest of the world—which was not possible for a European state.[5]

A country which is losing treasure through an unfavourable balance, will find that its prices fall and that, because of this, it is able to increase its export, secure a favourable balance and so bring back gold and silver until their values return to the world market levels.[6]

A special policy to secure a favourable balance was an attempt to perpetuate a divergence in the price of gold and silver between different countries and was bound to fail so long as communication between them was possible.[7] Furthermore it was dangerous and costly folly, for it forced the home consumers to put up with inferior goods on the irrational grounds that they had a favourable balance with the countries which produced them.[8]

[1] *Essays, New Universal Library Edition* (*all references to this edition*) p. 204.

[2] p. 226.

[3] p. 204.

[4] p. 225.

[5] p. 227.

[6] p. 226 ; this is done only in the case of a *reductio ad absurdum*.

[7] p. 227.

[8] p. 229. Like a true Scot, Hume chose, as an example, the case of claret and port.

And Hume concluded ". . . I should as soon dread, that all our springs and rivers should be exhausted as that money should abandon a Kingdom where there are people and industry. Let us carefully preserve these latter advantages and we need never be apprehensive of losing the former." [1]

IV.

All this had been said before, by Thomas Mun,[2] Isaac Gervaise,[3] and by Richard Cantillon [4] and they may well have made the point more effectively.[5] Nevertheless Hume was not expounding generally accepted doctrine : indeed his rigid Quantity Theory was attacked by most of the members of his own group. Oswald [6] conceded that the prices of an isolated economy would rise in proportion as the supply of money increased,[7] but he did not think that Hume was justified in applying this proposition mechanically in the case of an internationally trading society. He based his argument on two assumptions which were acceptable to most 18th century economists : that wages, in the long run were a function of the cost of living,[8] and that ". . . all transportable commodities will ever be nearly all the same price . . . because they may be transported from one country to another with the addition only of the charge of transportation . . . " [9] Now, supposing that a country experiences such a miraculous increase in her coin as Hume has postulated ; the immediate effect will be to

[1] p. 225.

[2] *England's Treasure by Foreign Trade*, 1928 reprint, p. 17.

[3] *The System of Theory of the Trade of the World*, 1720.

[4] *Essai sur la Nature du Commerce en general*, R.E.S. edition.

[5] On Gervaise, see Viner, *Studies in the Theory of International Trade*, 1937, p. 80 ff. On Cantillon, see Jevons' article of 1881 reprinted in the R E.S. edition of Cantillon, p. 353.

[6] *Caldwell Papers*, Vol. I, Pt. II, p. 93 ff.

[7] *ibid.*

[8] p. 99.

[9] p. 97. Cantillon made the same point, p. 153. Also John Law, *Money and Trade Considered*, 1760 ed., pp. 139-140. E. Heimann, *History of Economic Doctrines*, 1945, p. 44, does not support his assertion that Hume probably saw the MSS of Cantillon's *Essai* before the publication of the *Political Discourses*. It is true that Malachy-Postlethwayt did publish parts of the *Essai* in his " . . . *Plan* . . . *of the* . . . *Universal Dictionary* . . . " in 1749, when Hume was writing the *Discourses*, but they were not the relevant parts.

raise prices somewhat, but after that " . . . would not the necessaries of life and materials of manufacture imported at low prices necessarily reduce the price of labour and commodities? Would not a very small proportion of the increased money suffice for this purpose? Would there not in this interval be the greatest possible encouragement for cultivation at home and a flowing in of inhabitants from abroad to enjoy the high price of labour while it lasted . . . " [1] Oswald's theory was that movements of gold and silver would be naturally followed by movements of labour. An increase of 'M' by causing a similar increase of 'T' would not necessitate any change in 'P'.

He then proceeded to test his model. Holland was a country with a constantly favourable balance, but she paid no more for her food and raw materials than her neighbours [2] and " . . . she is constantly drawing in a fresh supply of people . . . who are attracted by the security, freedom and constant, uninterrupted employment ; circumstances which by increasing the number of labourers as the demand for labour increased would ever keep its price in perfect correspondence to the price of necessaries." [3]

Conversely, the case of the Hanse Towns supported Oswald's view that if a country did not share in a world-wide increase in the quantity of money, that would not enable it to expand its trade and thus gain its proportional share of the increased gold supply.[4]

Thus he concluded that Hume was in error when he said that the government should take care to preserve people and industry and need not bother about the balance of trade, for the two were intimately connected.[5]

V.

Hume replied one month later[6] and willingly conceded Oswald's point " . . . I am very pleased with your reasoning,

[1] p. 97.
[2] p. 100.
[3] *ibid.*
[4] p. 102.
[5] p. 93.
[6] *Letter* to Oswald, 1st November, 1750.

I agree with you that the increase on money if not too sudden, naturally increases people and industry . . . " [1] and he agreed to amend the draft accordingly. But this he never did. It is true that he inserted a footnote [2] to the effect that the quantity of money in any region will always be proportional to the " . . . commodities, labour, industry and skill . . . " which reside there, but this is merely an equilibrium condition whereas Oswald had tried to specify the direction of a causal relationship.

And this is the more surprising in view of the fact that, in other Essays, Hume produced a wonderfully subtle analysis of the process of absorption of new money into the economy, which concluded that. "The good policy of the magistrate consists only in keeping it (the quantity of money) if possible still increasing . . . A nation whose money decreases is actually at that time weaker and more miserable than another nation which possesses no more money but is on the increasing hand." [3] For when money is gradually increasing the direct stimulus of increased demand for goods [4] and the indirect stimulus of a reduced rate of interest,[5] both help to increase total output.

To modern economists, this is probably the flower of Hume's analysis and yet, in the Essay "Of the Balance of Trade," it is barely mentioned [6] and then in a discussion of paper-credit and without reference to the fact that a favourable balance of trade would have the same stimulus effect.

It is tempting to argue that Hume omitted discussion of this point from motives of expediency. His complete lack of faith in the judgment and moderation of his contemporaries is well known. But this will not do, for although expediency may permit omission it cannot justify contradiction and his comment on the formation of the state treasure of Henry VII is surely a contradiction. ". . . It is indeed probable that this sum might be three-fourths of all the money of England . . .

[1] *ibid.*
[2] *Essays*, p. 228.
[3] p. 209.
[4] p. 208.
[5] p. 222.
[6] p. 230 note with a warning against misuse.

Nor is it probable that the diminution of circulating money was ever sensibly felt by the people . . . The sinking of prices of all commodities would immediately replace it, by giving England the advantage in its commerce with the neighbouring Kingdoms." [1]

One is left with the impression that in spite of his excellent process analysis of inflation, Hume's thinking was always in terms of an instantaneous, rigid quantity theory.

VI.

Further support for this hypothesis comes to light when we consider Hume's theory of economic development. The economic history of a society can be divided into two distinct phases. In the earlier phase the family is a self-supporting group with consumption patterns and production methods fixed by tradition.[2] It is the true 'economic' society, and, according to Hume it is unlikely to change unless it is forced to do so by an outside agent.[3] The most important of these external forces is foreign trade [4] which by creating new wants [5] incites men to produce a disposable surplus of goods over and above their own traditional requirements.[6] Once this revolution has taken place and a desire for luxurious consumption has bred a spirit of calculation and ambition in economic affairs,[7] continuous future expansion and development become possible " . . . till every person in the state . . . enjoys as great plenty of home commodities . . . as he desires; which can never possibly happen." [8]

International trade, however, produces complications in this simple process. In the first place, what changes occur in our relationship with the country which originally enticed us

[1] p. 234. For Hume's misgivings and pessimism on the subject of paper credit see *Letters* to Adam Smith, July and October, 1772 and April, 1773—he is conveying the latest news of the affairs of the Ayr Bank.
[2] p. 189.
[3] p. 189.
[4] p. 191.
[5] *ibid.*
[6] p. 189.
[7] *ibid.*
[8] p. 192.

out of our barbaric sloth? At that time it was clearly more developed than we, and would sell us manufactures in exchange for agricultural produce.[1] Imitation would soon [2] lead some of our own inhabitants to set up as traders and manufacturers, but it was clear to Hume that they would be at a serious disadvantage compared with their foreign competitors—skills would be less well developed and the rate of interest [3] would be higher. Nor is there evidence to suggest that Hume thought that time would naturally reduce this leeway.[4]

Money, however, came to the rescue; for the monetary forces of the Quantity Theory would work in the opposite direction. " . . . There seems to be a happy concurrence of causes in human affairs which checks the growth of trade and riches and hinders them from being confined entirely to one people . . . Where one nation has gotten the start of another in trade, it is very difficult for the latter to gain the ground it has lost . . . [5] . . . But these advantages are compensated . . . by the low price of labour in every nation which has not an extensive commerce *and does not much abound in gold and silver.* Manufactures therefore gradually shift their places, leaving those countries which they have already enriched and flying to others whither they are allured by the cheapness of provisions and labour, till they have enriched these also and are again banished by the same causes." [6]

Analytically, this argument is very similar to the one with which Hume disposed of the mercantilist short term doctrine of the favourable balance; but it goes much further now, for not only is it impossible to secure a constantly favourable balance of trade but it is also impossible for one country to remain richer (in real terms) than the others for any length of time.

In the passage quoted, Hume seems to think that the advancement of the rich country will be reversed and that its

[1] p. 191.
[2] *ibid.*
[3] pp. 220-1.
[4] See *Letter* to Kames, March, 1758.
[5] List of advantages given in the text.
[6] p. 205. My italics.

industries will actually leave it to settle in poorer countries where prices are lower. This may be an extreme statement of his views; what is certain, however, is that the very wealth of a country may well produce unemployment and misery among its working population [1] and that " . . . 'tho a rich country . . . may long maintain its ground against a poorer, which makes attempts towards commerce, it will not be able entirely to annihilate or oppress it."[2]

VII.

This is just what James Oswald had thought would happen. He did not discuss the "real" advantages of accumulated skills, trade connections and a low rate of interest and we can only assume that he accepted Hume's remarks on these topics. But he denied most strongly that the favourable balance which these advantages would produce initially, would be an offsetting disadvantage. On the contrary, a favourable balance would strengthen the position of the rich country by encouraging the extension of home production and by attracting labour and raw materials (at world market prices) from the rest of the world " . . . such a country . . . [would] . . . be not only the manufacturer but the storehouse of the world . . . " [3]

The conclusion followed inevitably that " A country in this situation would, in some measure, be the capital of the world, while all neighbouring countries would, in respect of *its* advantages though not of *their own*, be as its provinces." [4]

VIII.

In this, Oswald was supported by the two respectable economists of the group: Adam Smith and Josiah Tucker.[5] Both were agreed that the 'real' advantages of the division of

[1] p. 192.

[2] *Letter* to Kames cited.

[3] *ibid.*, p. 98.

[4] p. 105. My italics.

[5] Tucker was well in the Hume group principally by way of his correspondence with the indefatigable Kames, see W. E. Clark, *Josiah Tucker, Economist*, Columbia U.P., 1903.

labour [1] and capitalistic, round-about, production [2] would enable a rich country to perpetuate its superiority over a poor country. In this they were diametrically opposed to Hume's theory, but it is interesting to note that they did not accept Oswald's extreme view that the superiority of the rich country over the poor would, naturally, tend to increase.

Adam Smith accepted Hume's Quantity Theory [3] and admitted that labour would generally be dearer in a rich country ; [4] but Work would be cheaper because of specialisation and hence his conclusion was that " . . . if some opulent countries have lost several of their manufactures by having been undersold in foreign markets by . . . poorer countries . . . this will rarely be found to have been merely the effect of the opulence of the one . . . and the poverty of the other. The rich country must have been guilty of some great error of police . . . " [5]

Tucker's treatment of Hume's hypothesis was less cavalier in so far as he tried to prove that it contained a logical error. A poor country (he said) will never reduce the superiority of a rich country merely by reason of the cheapness of its labour, because as soon as it begins to capture markets from the latter it will find the advantage of its superior cheapness disappearing.[6]

Factually, he confuted Hume by pointing out that Scotland was now a very much richer country than it was a century ago, and yet, he declared, linen cloth can now be bought cheaper and of better quality than then.[7]

[1] Tucker, "*The Question Resolved, whether a rich country can stand a competition with a poor country . . . with suitable inferences and deductions*," p. 33.

[2] "The inhabitants of a poor country, who . . . generally live from hand to mouth, dare not make such costly experiments or embark on such expensive or long-winded undertakings as the inhabitants of a rich country can attempt and execute with ease." *The Question Resolved*, p. 32.

[3] *Lectures on Justice, Police, Revenue, and Arms*, delivered at Glasgow, 1762-3, edited by E. Cannan, 1896, p. 197.

[4] *Draft of the Wealth of Nations*, written about 1763 and discovered and printed for the first time by Scott, *ibid.*, pp. 332-3.

[5] *ibid.*

[6] *Letter*, Tucker to Kames, July, 1758. Printed in A. F. Tytler, *Memoirs of the Life . . . of Henry Home of Kames*, 1807.

[7] *ibid.*

IX

The underworld, however, was inclined to agree with Hume's general conclusion although it often disagreed with particulars of his analysis. Robert Wallace [1] was perhaps an exception to this generalisation. He denied Hume's rigid Quantity Theory on two counts : firstly, he doubted whether it was proper to consider the price-level [2] as determined solely by the supply of money ignoring " . . . methods of living and men's opinions [which] are constantly changing . . . " : [3] secondly, he insisted that production was not independent of the supply of money and he chided Hume for forgetting his own analysis on the point.[4]

So far as the economic expansion of one country was concerned, he agreed with Hume that it could " . . . never extend its trade *in infinitum* or over all the world . . . " [5] but he also thought that " . . . a richer country . . . may always maintain its superiority in trade over a poorer and a greater quantity of money . . . will be an advantage to this end." [6]

But if Wallace was undecided, Lord Kames [7] and Sir

[1]Wallace was a minister of the Church of Scotland. I will quote from the *Characteristics of the Present Political State of Great Britain*, 1758—which was mainly directed against the pessimism and Toryism of Hume. On another occasion they crossed swords, the controversy on the populousness of the nations of antiquity, see Wallace, *A Dissertation of the numbers of Mankind*, 1753 and Hume, *Of Ancient Populousness*. They must have been personal friends as Hume corrected the proofs of Wallace's *Dissertation*.

[2]"*Characteristics . . .* " p. 38 ; he seems to doubt whether it is valid to speak of '*The*' price-level, since individual prices can rise when the quantity of money is decreasing.

[3]*ibid.*, p. 40.

[4]*ibid.*, p. 22-23 and p. 35.

[5]p. 42.

[6]*ibid.*

[7]Henry Home, Lord Kames, a Lord of Justiciary of Scotland, was a friend of long-standing of Hume. Mildly eccentric and a prolific writer on all subjects. Despite this he was an important figure in the intellectual ferment of the time. See A. F. Tytler (Lord Woodhouselee), *Memoirs of the Life and Writings of Henry Home of Kames*, 1807.

James Steuart [1] pressed Hume's fundamental pessimism to the bitterest extreme.

Kames' principal claim to fame is his careful amalgamation of Hume's short-term analysis of inflation and his long-term Quantity Theory, which led him to the conclusion that "The consequences of a favourable balance . . . are sweet in the mouth but bitter in the stomach . . . " [2] Sweet, because in the short run it would stimulate increased productivity : [3] bitter because sooner or later the increased demand would overhaul the increased productivity and cause prices to rise and thus bring about an unfavourable balance, a drain of gold and all the short-term miseries which that involved.[4]

Nevertheless, Kames seems to have thought that it would be possible to avoid these eventualities and to enjoy the best of both worlds if the government took suitable preventive measures.[5] But his pessimism went deeper than this. It has already been pointed out that both Smith and Tucker had held that misbehaviour might annul the natural advantages of a rich country ; Kames thought that misbehaviour was usually a direct consequence of wealth. The 'chrematistic' society had a rotten core. "Affection for property. Janus double-faced, productive of many blessings but degenerating to be a curse. In thy right hand, industry, a cornucopia of plenty : in thy left, avarice, a Pandora's box of deadly poison."[6] Particularly if wealth increased rapidly, the honest virtues

[1] Another of the Hume group (*Letter* to Mure, October, 1775), although Hume had a poor opinion of the monumental *Inquiry into the Principles of Political Œconomy*, 1767, but this seems to have been a stylistic criticism (see Greig, Vol. II, p. 158). There is no good life of Steuart, "*The Anecdotes . . .*" by his son in Volume VI of the 1805 ed. of his *Complete Works* is the best that is available. For a moderately sympathetic appraisal see Marx, *Theorien*, Vol. I, pp. 29-32 ; *Capital*, Vol. I, p. 323 and Johnson, *op. cit.*, Chap. XI : More harsh treatment in Sigmund Feilbogen, "James Steuart und Adam Smith, in *Zeitschrift für die gesammte Staatswissenschaft*, 1889, p. 222 ff.

[2] *Sketches of the History of Man*, 1774, Vol. I, p. 77; this treatise is very much more than a book on Political Economy ; in its scope it is comparable to *Les Esprits des Lois*, of Montesquieu.

[3] Vol. I, p. 78.

[4] Vol. I, p. 81.

[5] Vol. I, pp. 82-83.

[6] Vol. I, p. 67.

would be stifled and moral degeneracy would soon lead to poverty. Hence " . . . nations go round in a circle from weakness to strength and from strength to weakness. The first part of the progress is verified in a thousand instances ; but the world has not subsisted long enough to afford any clear instances of the other . . . " [1]

Steuart was not an eccentric and although he reached the same conclusion as both Kames and Hume, he travelled by a different route. He admired the simplicity of Hume's Quantity Theory but he could not accept it.[2] It is spending which determined the level of prices and not the quantity of money which happens to be in existence at any time " . . . if we increase the quantity of money nothing can be concluded as to prices because it is not certain that people will increase their expenses in proportion to their wealth ; and although they should, the moment the additional demand has the effect of producing a sufficient supply, prices will return to the old standard." [3]

Nor is anything to be gained by arguments to absurdity. For if, following Hume, we assume that four-fifths of a country's money disappears overnight, the overwhelming preponderance of foreign demand will soon drain the nation of all transportable goods and cause, not a reduction of prices, but starvation.[4]

Nevertheless, Steuart was not persuaded that it was possible for a nation to expand indefinitely. Each nation, he thought, went through an economic life-cycle in which international trade plays an important role. In the beginning it is underpopulated and undeveloped ; when once industries have been established opportunities will arise of trading with less developed lands and this trade will be a constant stimulus to increased employment and a more complete exploitation of its natural resources. This phase may be inflationary but it is

[1] Vol. I, p. 452 ; compare *Letter* Hume to Kames, March, 1758, where a similar cyclical philosophy emerges.

[2] *Principles*, Vol. II, p. 78 ff, where he aims his remarks expressly at Hume and Montesquieu.

[3] *ibid.*, Vol. II, p. 103.

[4] Vol. II, p. 109.

not necessary that it should be so, given suitable economic policy.[1]

The second phase occurs when foreigners begin to set up competitive manufactures of their own [2] and when domestic costs begin to get out of line with foreign costs.[3] This is the famous case of the consolidation of profits into costs. What happens is that the abnormally high profits and wages of the expansionary period come to be considered as normal and can be reduced only with the utmost difficulty.[4] This phase is pleasant enough, however, if adequate action is taken to maintain the proportion between the demand and the supply of work [5] and expansion can continue. But it will not last. Population growth and the inability of the country to increase its production of food will force it to import food from abroad at a time when its high costs of production have reduced its earnings of foreign currency to a very low level. When this time comes Steuart's only way out is to encourage emigration and the establishment of colonies.[6]

X.

That brings us to the end of our very brief survey of the facts of the controversy. For convenience it may be permissible to classify the doctrines expounded as either 'optimistic' or 'pessimistic' and there is doubtless something to be gained from such a procedure. It is more interesting however to observe how different roads could bring one to the same conclusion. And from the conclusion, policy recommendations followed with impeccable logic for all were trying to achieve the same fundamental object.[7]

The "optimists" Smith and Tucker were agreed that Britain was already a rich country and hence that there really

[1]The whole of Book II of the *Principles* is devoted to the history of the life-cycle. It is vastly complicated and I cannot give more than the briefest of outlines, Vol. I, p. 277 *et seq.*, Vol. I, p. 279 and Vol. II, p. 221.

[2]Vol. I, p. 256 ff.

[3]Vol. I, p. 283 and pp. 295-6.

[4]*ibid.*

[5]Vol. I, p. 435 and Vol. II, pp. 241-2 and Vol. II, p. 21.

[6]Vol. II, pp. 6-7.

[7]See Heckscher, *Mercantilism.* Part V.

was no need for the government to intervene to safeguard advantages which we were not in danger of losing.

This, I take it, was the central point of *The Wealth of Nations*. Tucker was slightly less confident. There was a danger that normal degeneracy would handicap our further expansion and so he counselled the government to take firm measures to stamp it out and scattered through his works a formidable list of specific suggestions.[1]

He also took a more extensive view of the problem than Smith,[2] for he recognised that the policy which was right for Britain would not necessarily be right for a poor and undeveloped country. In this case, it would be the duty of the government to see to it that " . . . the rich [are] prevented from swallowing up the poor . . . " [3] by protecting domestic industries from foreign competition. This was not to be done indescriminately " . . . that particular trade is not worth having which can never be brought to support itself . . . " [4] but only to those " . . . infant manufactures . . . as promise to become of general use and importance . . . " [5].

Oswald, too, was an optimist but of a different variety from Tucker and Smith. They had emphasised the technical advantages enjoyed by a rich country and had tended to discount the countervailing influence of the economic factor of scarcity of resources which was the basis of Hume's Quantity Theory. Neither of them, however, were able to deny that there was some validity in Hume's argument. Oswald, by refusing to accept Hume's Quantity Theory, was able to argue that the favourable balance which a rich country enjoyed, would, of itself, ensure that its superiority was maintained.

[1] See in particular, "*The Manifold Causes of the Increase of the Poor . . .*" 1760, pp. 17-23. Tucker would tax all luxuries, bachelordom, alehouses, and racers (animal or human). He even suspected that the English parliamentary franchise was a cause of insubordination and vice.

[2] See "*Elements of Commerce and the Theory of Taxes*," 1755 in which he prides himself that the "Principles laid down in the ensuing Treatise are, for the most part General and Universal, *viz.* such as would suit . . . any Kingdom . . . " p. 2.

[3] *Letter*, Tucker to Kames, July, 1758.

[4] *Instructions to Travellers*, 1757, p. 33.

[5] *ibid.*

Like the capital of a State, it would continue to grow and would increasingly become the centre of gravity of the industry of the world. The best that the poorer countries could hope for was to be provinces, producing raw materials for the international capital.

Like the Smith-Tucker theory, there was nothing intrinsically optimistic about Oswald's theory. It all depended on what your judgment was of the present economic state of Great Britain. I do not think that there is any doubt that Smith and Tucker were convinced that Britain was one of the rich countries of the world, and that this was the cause of their complacency. In the case of Oswald this is not so clear, for Holland, and not Britain was the example he chose of a rich country (in this he was merely following the usual 18th century view). But if he really thought that Britain was not one of the most advanced countries of Europe, then his policy of non-intervention in economic affairs is quite unaccountable. On the shewing of his own theory, *laisser faire* could only mean perpetual poverty for a backward state.

Unlike Hume, Oswald was interested in maintaining a positive balance of trade : but unlike many of the earlier mercantilists, he was convinced that if only we allowed grain to be imported freely,[1] and desisted from imposing taxes which raised the cost of living and hence the price of labour[2], Britain, at any rate, could rely on having a favourable balance without any further controls.[3]

This, it seems to me, is the crux of the difference between the primitive mercantilists and the primitive non-interventionists—the latter believed that the position of Great Britain was such that she could naturally enjoy the situations which the former had sought to engineer. Great Britain could do this, but, as yet, they were not sure about the less favoured parts of the world. For this reason Tucker was quite prepared to recommend protection and an active economic policy in the case of backward countries. Smith, also, saw the difficulty

[1] *Caldwell Papers*, pp. 98-99.
[2] *ibid.*
[3] p. 107.

but was able to reconcile it with his *laisser faire* philosophy by denying the basic mercantilist axiom that industrialisation was a good thing and arguing that agriculture was a more efficient producer of economic welfare (*Wealth of Nations*, Bk. II, Ch. V and Bk. III).

The pessimism of the others led them to advocate some measure of government intervention.

In the case of Hume there is a curious schism between the two aspects of his work. He was pre-eminently conscious of the advantages of free-trade [1] and he denounced the stupid jealousy which would exclude foreign goods just because they were foreign.[2] Free-trade, however, was not with him a fetish and he specified two cases where it ought to be restricted. The first was the case of the infant industry [3]—although here he was not so refined as Tucker ; the second case was where a rich country had arrived at its contractionist phase and foreign competition was injuring domestic industries. Then " . . . in the interests of happiness of so many millions . . . " it must be shut off and the nation must continue its progress in isolation.[4] Both Hume and, after him, Wallace thought that this would be quite possible.[5]

The proposals which Kames and Steuart put forward were much more complicated—and necessarily so for they both brought many more variables into their analyses. They need not detain us here. It is of some interest, however, to point out that Steuart's introduction of a third phase into the life-cycle of a nation swept away the comfortable belief of Hume and Wallace that continuous, though isolated, expansion was always possible. Steuart's analysis left no easy way out ; it brought economic progress into direct contact with the problem of population which Hume and Wallace had both foreseen but which they had not incorporated into their theories of

[1] *Essays*, p. 191 and the whole Essay, "Of the Jealousy of Trade" which is a fairly uncompromising statement of the *laisser faire* position.
[2] *ibid.*
[3] p. 236.
[4] p. 192.
[5] *Characteristics*, pp. 43-44.

development. Diminishing returns to labour employed in agriculture, although it is implicit in the idea of economic restraints on population growth, was consistently ignored by the early theorists of economic growth, but once Steuart had introduced it into his model, it proceeded to exert an ever increasing influence until it completely dominated the speculations of Ricardo. Adam Smith, who had been so confident in his early writings of the possibility of continuous economic expansion, felt obliged to modify his argument in the *Wealth of Nations* where it was recognised that there is a limit to the process of expansion. Sometime, a country reaches its " . . . full complement of riches . . . " [1] when the rate of profit has been forced by competition to such a low level that further accumulation of capital is disgorged into the international carrying trade.[2] Smith seems to have considered this outcome inevitable and there is no discussion in the *Wealth of Nations* of the policy which should be adopted to avoid it. Steuart, however, with his greater faith in the ability of governments to control economic events felt obliged to incorporate in his *Principles of Political Œconomy* a complete handbook of policies for use at all stages of the life of a state, from birth to death.

XI.

Nobody ever used the handbook : indeed the problems of the pattern of economic progress which Hume had raised were soon forgotten. Smith and the optimists won the day and the doubts which began to arise were, at this stage, purely academic. The reason for their victory is not hard to see. It was not a matter of logic though logic was to come to strengthen the victory. The conquering hero was the thriving capitalist and the industrious journeyman of Yorkshire and

[1] *Wealth of Nations*, 1811 ed., Vol. I, p. 144.
[2] *ibid.*, Vol. II, pp. 38 and 69.

Birmingham whose virtues had so impressed Dean Tucker : [1] and the patent inability of the 18th century official to carry out even the simpliest operations of intervention (such as stimulating the Scottish Herring Industry).[2]

In one respect, however, Hume's problem did leave a permanent mark on the corpus of economic theory. It will be remembered that in the Glasgow lectures, Smith had accepted the rigid statement of the Quantity Theory of Price's which is to be found in Hume's *Political Discourses.* In the *Wealth of Nations,* Bk. II, Ch. II, this was eliminated and it was argued that an increase in the quantity of money above what was necessary to carry on the process of circulation would be carried abroad to buy imports without any mention of its effect on internal prices. Economists have often asked why Smith failed to mention Hume's more elegant Quantity Theory in this context, but when we recall the insidious way in which Hume had used his theory to demolish the hypothesis of continuous economic progress in an individual country and the attacks which men like Wallace and Steuart had made on the validity of the Quantity approach, Smith's retreat to a circularity becomes understandable if it is not justified.

Nonetheless the problem had been a real one in the minds of the writers whom we have mentioned. Their work is marred by many blemishes—they did not make any explicit distinction between the short and the long cycles of progress, they took too narrow a view of the possibilities of specialisation and trade between industrialised nations. The weakness of the analytical tools at their disposal is quite apparent. It is particularly obvious in James Oswald's attempt to show that a miraculous increase in the supply of money would not be *entirely* drained away by increased imports,[3] and in Tucker's claim [4] that low costs of production due to monetary factors

[1] *Instructions to Travellers,* pp. 24-25 and p. 21.

[2] *The Wealth of Nations,* 1811 edition, Appendix to Volume II where Smith produces statistics to prove the wastefulness of the Scottish Herring Subsidy. Kames was a member of the body which administered this subsidy.

[3] Above, p. 314.

[4] Above, p. 319.

above, could never be sufficiently permanent to undermine the "real," technical superiority of a rich country. Yet, defective though the analysis may have been, who will say that they were not trying to solve a real problem? But problems are not timeless and when we do not need a solution we can rarely be persuaded to look for one.

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